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SONY KV-25DXR SERVICE MANUAL

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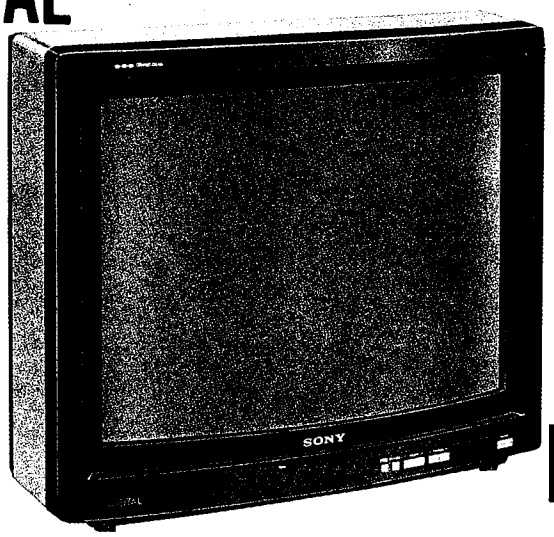
2505

KV-25DXR
RM-727/APM-X3U

SERVICE MANUAL

US Model
Chassis No. SCC-648E-A



June, 1985

P3 CHASSIS

SPECIFICATIONS

Television system
American TV standards
Channel coverage
VHF: 2–13
UHF: 14–69
Cable TV: 1–125
Picture tube
Microblack Trinitron
25-inch picture measured diagonally
26-inch picture tube measured diagonally
114-degree deflection
Antenna
75-ohm external antenna terminal for VHF/UHF/CATV
Inputs
VIDEO 1, 3 INPUT (phono jacks)
Video: 1 V p-p, 75 ohms unbalanced, sync negative
Audio: 408mVrms (100% modulation, 47 kilohms)
VIDEO 2 IN AV (AV jack)
Video: 1 Vp-p, 75 ohms unbalanced, sync negative
Audio: 408mVrms (100% modulation, 47 kilohms)
RGB MULTI INPUT (See next page.)
CONTROL IN (minijack)
5V p-p
75-ohm external antenna terminal for VHF/UHF/CATV
AUX 75-ohm auxiliary antenna terminal
FROM TV STAND connector for the optional SU-171 TV stand

Outputs
TV OUT (AV jack)
Video: 1 Vp-p, 75 ohms unbalanced, sync negative
Audio: 408mVrms (100% modulation, 5 kilohms)
MONITOR OUTPUT (phono jack)
Video: 1 Vp-p, 75 ohms unbalanced, sync negative
Audio: 408mVrms (100% modulation, 5 kilohms)
CONTROL OUT (minijack)
5V p-p
PHONES (stereo minijack)
Accepts 8-ohm headphones
SPEAKER
Accepts speakers of 8 ohms
TO CONVERTER terminal
Power requirements
120V AC, 60 Hz
Power consumption
185 W (max.)
2.5 W (in standby condition)
AC outlet
Unswitched max. 100 W
Dimensions
635 × 547 × 478 mm (25 × 21 5/8 × 18 7/8 inches) without speakers
700 × 547 × 478 mm (27 5/8 × 21 5/8 × 18 7/8 inches) including speakers
Weight (without speakers)
47.5 kg (104 lb 11 oz)

— Continued on page 2 —

MICROFILM

CABLE COMPATIBLE TV
SONY®

CTV

Accessories supplied

Side-mounting speakers (Weight approx. 1.5 kg each)with speaker cords .....1 pair
35 cm² (5.4 in²), APM unit
55 cm² (8.5 in²), Bass radiator unit
Remote Commander RM-727 with 2 size AA batteries
Connecting cable.....1
Antenna connector (300 ohm to 75 ohm matching transformer) 1

Optional accessories

TV stand with foot pedals SU-171
TV stand SU-172
Audio/Video connecting cables (See page 12)
U/V mixer EAC-66
RGB multi connector PX-34
Plug adaptor PC-33
Audio connecting cable RK-74A

RGB MULTI INPUT (34-pin plug)

Pin No.	Signal assignment
1	+5 V power supply
2	+5 V power supply
3	Audio (R) input ground
4	Ground
5	Remote control ground
6	Composite video output ground
7	Audio (L) input ground
8*, 9*, 10*	Ground
11	Ground
12*, 13*	Ground
15*	Ground
16	Ground
20	Audio (R) input
21	Mode select
23	Composite video output
24	Audio(L) input
25	Red input
26	Green input
27	Blue input
29*	Blanking input
30*	H. sync or composite sync
31*	V. sync
33	RGB/NORMAL mode select
34	Audio select
14, 17, 18, 19, 22, 28, 32	Not in use

* For No. 8 and 25, 9 and 26, 10 and 27, 12 and 29, 13 and 30, or 15 and 31 connections, use a twisted-pair lead.

Design and specifications subject to change without notice.

SAFETY-RELATED COMPONENT WARNING !!

COMPONENTS IDENTIFIED BY SHADING AND MARK ⚠ ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY. CIRCUIT ADJUSTMENTS THAT ARE CRITICAL TO SAFE OPERATION ARE IDENTIFIED IN THIS MANUAL. FOLLOW THESE PROCEDURES WHENEVER CRITICAL COMPONENTS ARE REPLACED OR IMPROPER OPERATION IS SUSPECTED.

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety checks before releasing the set to the customer:

1. Check the area of your repair for unsoldered or poorly-soldered connections. Check the entire board surface for solder splashes and bridges.
2. Check the interboard wiring to ensure that no wires are "pinched" or contact high-wattage resistors.
3. Check that all control knobs, shields, covers, ground straps, and mounting hardware have been replaced. Be absolutely certain that you have replaced all the insulators.
4. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.
5. Look for parts which, though functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.
6. Check the line cord for cracks and abrasion. Recommend the replacement of any such line cord to the customer.
7. Check the condition of the monopole antenna (if any).
   Make sure the end is not broken off, and has the plastic cap on it. Point out the danger of impalement on a broken antenna to the customer, and recommend the antenna's replacement.
8. Check the B+ and HV to see they are at the values specified. Make sure your instruments are accurate; be suspicious of your HV meter if sets always have low HV.
9. Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microampers). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2 V AC range are suitable. (See Fig. A)

HOW TO FIND A GOOD EARTH GROUND

A cold-water pipe is guaranteed earth ground; the cover-plate retaining screw on most AC outlet boxes is also at earth ground. If the retaining screw is to be used as your earth-ground, verify that it is at ground by measuring the resistance between it and a cold-water pipe with an ohmmeter. The reading should be zero ohms. If a cold-water pipe is not accessible, connect a 60–100 watts trouble light (not a neon lamp) between the hot side of the receptacle and the retaining screw. Try both slots, if necessary, to locate the hot side of the line, the lamp should light at normal brilliance if the screw is at ground potential. (See Fig. B)

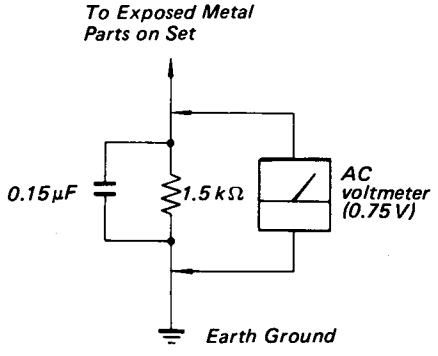


Fig. A. Using an AC voltmeter to check AC leakage.

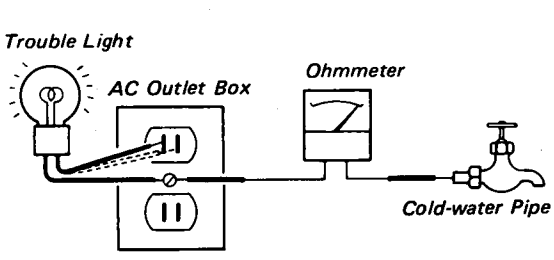


Fig. B. Checking for earth ground.

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REMOTE COMMANDER RM-727/SPEAKER SYSTEM APM—X3U		113

SECTION 1
GENERAL

1-1. FEATURES

- **New Microblack™ Trinitron** picture tube with more finely pitched aperture grille for higher resolution, higher contrast picture
- **Built-in stereo decoder** decodes MTS (Multichannel TV Sound) broadcasts into left and right stereo or SAP (Second Audio Program) channels*
- **Multi-band VHF/UHF/CATV tuner** receives up to 125 cable channels for a total of 181 possible off-air and cable channels
- **Supplied detachable speakers** featuring Sony's APM (Accurate Pistonic Motion) technology, magnetically shielded to provide superb sound reproduction with no interference to picture quality
- **Two built-in video and L/R audio line inputs and a new AV uniconnector** allow direct hook-up to VCRs, video disc players, video games or other audio/video sources. The AV uniconnector receives combined video and L/R audio signals for one easy connection.
- **Built-in video and L/R audio line outputs** provide the selected output from the TV tuner or any of the equipment connected to the audio-video line inputs or the AV uniconnector.
- **An AV (audio and video combined) type output jack** for continuous output from the TV tuner and easy connection
- **An AC outlet** provides ac power of 100 W max. for a microcomputer to be connected.
- **Built-in RGB input** for higher resolution display of computer-generated text and color graphics
- **Full-function RM-727 Remote Commander** provides wireless control of all operating controls
- **On-screen displays** for easy reference to operating modes and adjustments
- **Dynamic Focus™ circuitry** automatically focuses the scanning electron beam for enhanced sharpness over the entire picture, especially in the corners.
- **Auto white balance (AWB)**
  The AWB circuitry constantly monitors the color signal being received and adjusts the color level to help keep it consistent and well-balanced.
- **Digital colorpure filter**
  With the advanced digital colorpure filter, this television offers picture performance with enhanced color resolution and extremely sharp focus with minimum color spill or distortion.

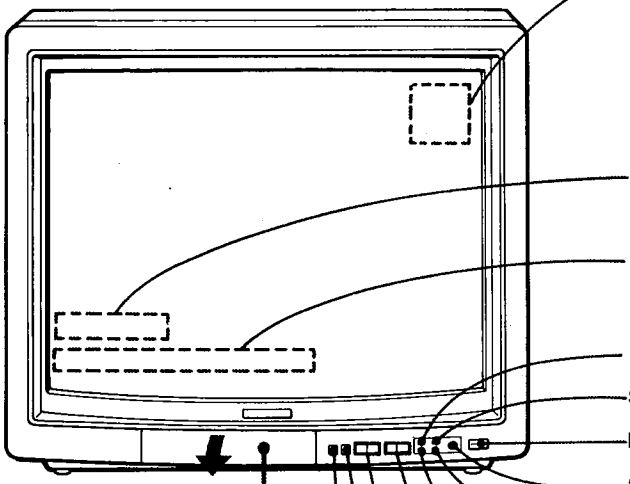
Sony Home Management Helper (HMH) system
A handy convenience feature that will help you run your home more efficiently with your TV. Using the Remote Commander, you can record birthdays and other important dates, list appointments, and enter due dates for bills and other financial matters —the HMH system will automatically warn you every day for two weeks before these dates arrive! In addition, you can preset times for the TV to turn on and off, to operate a VCR, and even prevent programs from being watched. For details on operating the HMH system, refer to the separate operating manual.

* Depends on availability of off-air stereo broadcasts.

1-2. LOCATION OF CONTROLS

For details on the use of each control, refer to the pages indicated in brackets.
See page 10 for the location of jacks and controls on the back.

Front



On-screen display for the following:
- Channel numbers
- "MAIN", "SAP" or "BOTH" modes
- The selected input sources, "VIDEO 1, 2 or 3", "EXT-A" or "RGB"
- The "AUX", "MUTING" or "SLEEP" indicators.

Item display
The selected item to be adjusted by the ADJUSTMENT buttons or the "TRINITONE" and "RESET" indicators will appear here.

Adjustment display
Indicates level of the various adjustments made to the picture and sound.

VIDEO lamp [8]

SLEEP lamp [8]

POWER switch [8]

Remote control detector [114]

STEREO lamp [8]

RGB lamp [14]

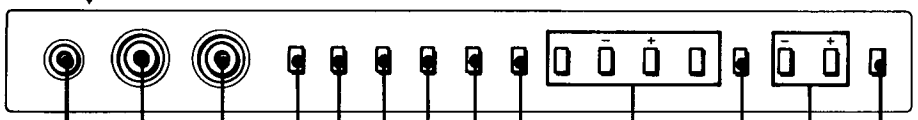
CHANNEL scan buttons [8]

VOLUME buttons [8]

TV/VIDEO button [14]

HMH button [See separate manual.]

Press to open the panel.



PHONES (headphones) jack (stereo mini-type) [9]

VIDEO 2 IN (input) AV uniconnector

TV OUT (output) AV jack

AUTO STEREO selector [8]

MTS (Multichannel TV sound) button [8]

ANT/AUX button [8]

CABLE ON/OFF button [10]

ERASE button [10]

ADD button [10]

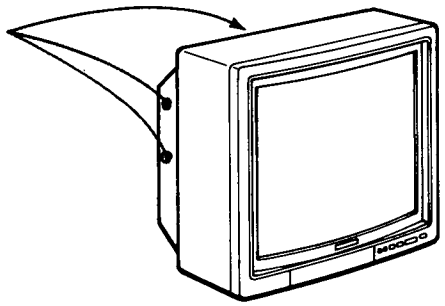
ADJUSTMENT buttons [9]

RGB button [14]

PICTURE buttons [8]

AUTO TIMER ON/OFF button

Projections for attaching speakers.

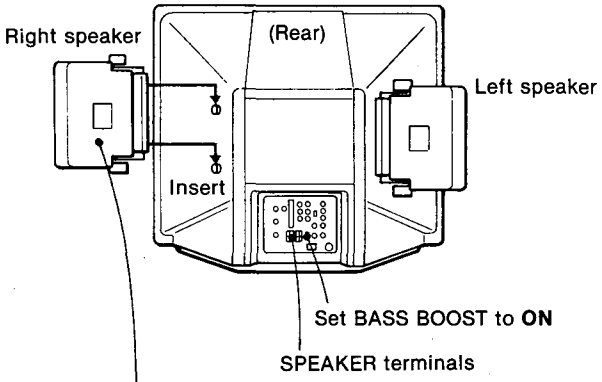


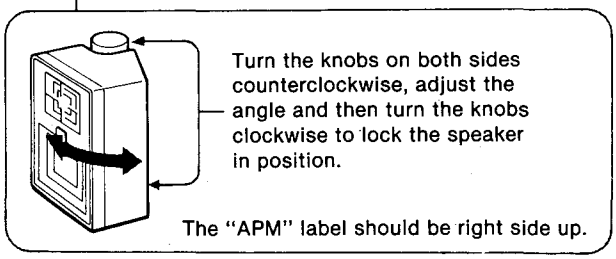
1-3. SET-UP

SPEAKERS

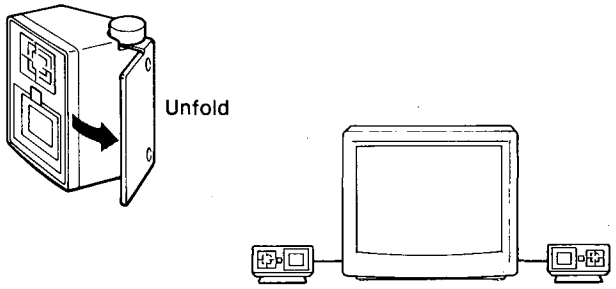
Placement

Attaching the speakers to the TV




Turn the knobs on both sides counterclockwise, adjust the angle and then turn the knobs clockwise to lock the speaker in position.
The "APM" label should be right side up.

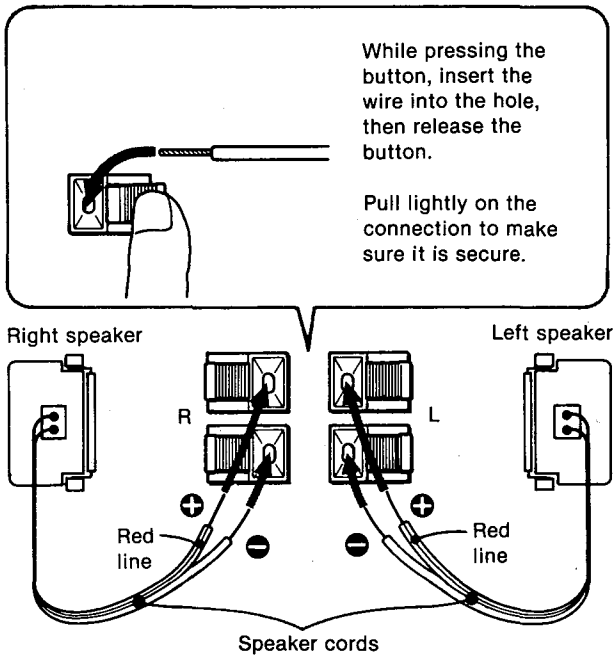
If desired, the speakers can be placed separately from the TV by unfolding the stand.



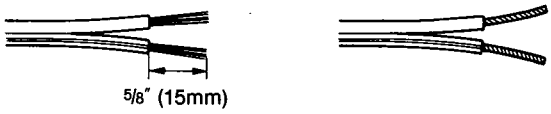
- Adjust the angle of the speakers, for best sound production.

Connection

The speaker cord marked with a red line should be connected to the ⊕ (red) terminal and the cord unmarked to the ⊖ (black) terminal for correct in-phase operation.


While pressing the button, insert the wire into the hole, then release the button.
Pull lightly on the connection to make sure it is secure.
Right speaker
Left speaker
R
L
Red line
Red line
Speaker cords

If desired, larger 8-ohm speakers can be used as long as they are rated at 8-ohm impedance.
Expose and twist the wire ends of the cords of your speakers as illustrated below, and make the correct ⊕ ⊖ connections. For large speakers, set BASS BOOST switch on the TV to "OFF" to prevent excessive bass.



Strip about 5/8" (15mm) of the wire insulation from the ends...

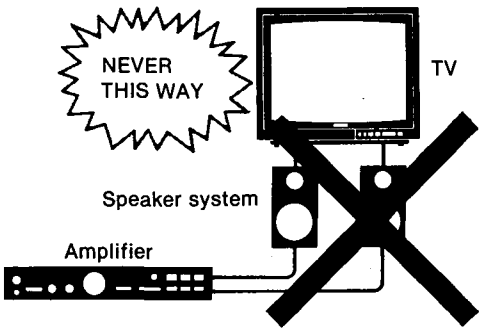
and then twist the wire ends.

Caution

- Be sure to use speakers that are rated at 8-ohm impedance with normal power holding capacity of more than 10W.
- Make sure that none of the wire strands stick out, making contact with the neighboring speaker terminals.
- If you have connected a pair of speakers other than the supplied speakers, make sure to place the TV set at a distance away from the speakers so that it will not be affected by the speaker magnets. If a temporary proximity to magnets should cause portions of the picture to have poor color, turn the POWER off, and after about 10 minutes, turn it on again.

Speakers with low magnetic flux leakage such as the SS-X10A speaker systems (optional) may be placed near the set.

- Never connect an amplifier and this TV simultaneously to the speakers as this may damage the TV.



1-4. OPERATION

Preparation
Make sure the following are properly set.
- On-screen "VIDEO 1, 2 or 3", "EXT-A" or "RGB"* indicators and the RGB or VIDEO lamp should be off. (Press TV/VIDEO button or RGB button as many times as necessary until they go out.)
- AUTO STEREO selector should be set to ON (depressed).
  Depending on the channel to be viewed, check the following and change as necessary.
- CABLE ON/OFF button
  For VHF and UHF channels, set to OFF ⊓.
  For cable TV channels, set to ON ⊓.
- On-screen "AUX"* indicator
  (Press ANT/AUX button to change as necessary.)
  For VHF, UHF and regular cable TV channels:
  The indicator should be off.
  For pay cable TV channels:
  The indicator should be displayed.

*The displays, "VIDEO", "EXT-A", "RGB" or "AUX" indicate that signals fed in through the VIDEO 1/3 INPUT jacks, VIDEO 2 IN AV uniconnector, the external audio jacks, the RGB MULTI INPUT connector or through the AUX terminals are being received.

1 Press POWER to turn on the TV.
The channel number will be displayed on the screen and the SLEEP lamp will light up for several seconds.

2 Select channels in one of the following two ways.
- Press the numeral(s) of the channel and then press ENTER.
  Ex. To select channel 6, press 6 and then ENTER.
  To select channel 125, press 1, 2, 5 and then ENTER.
  If you pressed a wrong numeral, wait for a few seconds and it will disappear. Then try again.
- Press CHANNEL "+" for higher-numbered channels and "−" for lower-numbered channels. Preset channels will appear in sequence. (For presetting desired channels, see page 9.)
  The channel display will remain on the screen for a few seconds. To keep the display on the screen, press DISPLAY.

3 Adjust the volume and picture to your preference, if necessary.
Press VOLUME "+" to increase volume, or "−" to decrease it.
Press PICTURE "+" to increase picture contrast, or "−" to decrease it.

To mute the sound immediately, press MUTING. The "MUTING" display will appear and remain on the screen. Press it again to restore the sound to its previously-set level or press VOLUME "+".

To turn off the set, press POWER again.

To have the set turn off automatically after one hour, press SLEEP. The "SLEEP" display will appear on the screen a few seconds and the SLEEP lamp on the TV will remain lit for one hour.

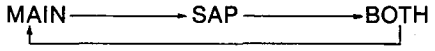
To cancel the sleep timer, press SLEEP again so that the "SLEEP" display turns off, or turn off the TV.

LISTENING TO MULTICHANNEL TV SOUND(MTS) BROADCASTS

In the years to come, an increasing number of programs will be broadcast in stereo. Called Multichannel TV Sound or MTS, the new technology will greatly enhance TV viewing by bringing you programs with high fidelity stereo sound. MTS also provides for an extra channel called the Second Audio Program or SAP which broadcasters can use to transmit a second language for bilingual transmissions or some other sound track.

To receive a stereo program
Normally set the AUTO STEREO selector to ON (depressed). In this position, the STEREO lamp on the TV will light up whenever a stereo broadcast is received.
To listen to the stereo sound, select the MAIN mode with the MTS button so that the on-screen MAIN indicator appears. The stereo sound will be heard from the left and right speakers.

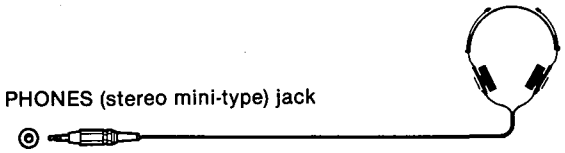
Every push on the MTS button changes the indicator below the channel number as follows:



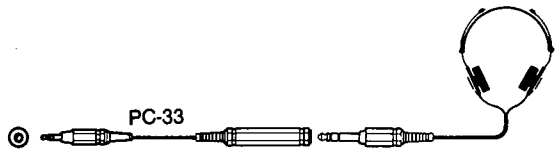
When there is a SAP (Second Audio Program) broadcast
Select the SAP mode so that the SAP indicator is displayed and only the SAP sound is heard from both speakers.
To listen to both MAIN and SAP broadcasts
Select the BOTH mode so that the BOTH indicator is displayed. The MAIN and SAP sounds come out from the left and right speakers respectively.
The MAIN sound becomes monaural(mixed) even if it is a stereo broadcast, as the sound comes only from the left speaker.

Notes
- The selected mode will be retained even after the power is once turned off.
- There may be cases of stereo broadcasts where excessive "noise" will be heard due to a weak incoming signal. By switching the AUTO STEREO selector to OFF and returning to a monaural mode, the noise should be eliminated.
- When the SAP mode is selected and there is no SAP broadcast, no sound is heard from the speakers. (If the BOTH mode is selected, the sound is heard only from the left speaker.)
- SAP broadcasts are always transmitted with the MAIN broadcast.

Use of headphones
For private listening of sound, connect a pair of 8-ohm headphones (optional) to the PHONES jack. The sound from the speakers will be cut off automatically.



If the plug of your headphones is a stereo phone-type plug, use the optional Sony PC-33 plug adaptor.



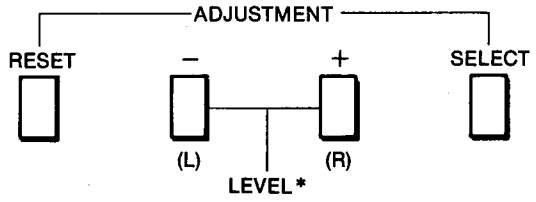
An earphone can also be connected to listen to the monaural (left channel) sound.

ADDITIONAL PICTURE AND SOUND ADJUSTMENTS

(Hue: Color: Brightness: Sharpness: Treble: Bass: Balance)

Additional picture and sound adjustments besides the adjustments made by the PICTURE and VOLUME buttons can be made as follows although your TV comes with its picture and sound preset at the factory for optimum performance.
The adjustments made can be cleared and the factory preset levels will be restored at once when the **RESET button** is pressed. (A "RESET" indicator will appear for a few seconds.)

Controls are inside the front panel.



1 Press SELECT button consecutively until the on-screen display of the item you desire to adjust appears.
The display will change as follows:

HUE → COLOR → BRIGHT → SHARP → TREBLE → BASS → BALANCE → back to HUE

The display will disappear after a few seconds but will appear again when the next step is taken.

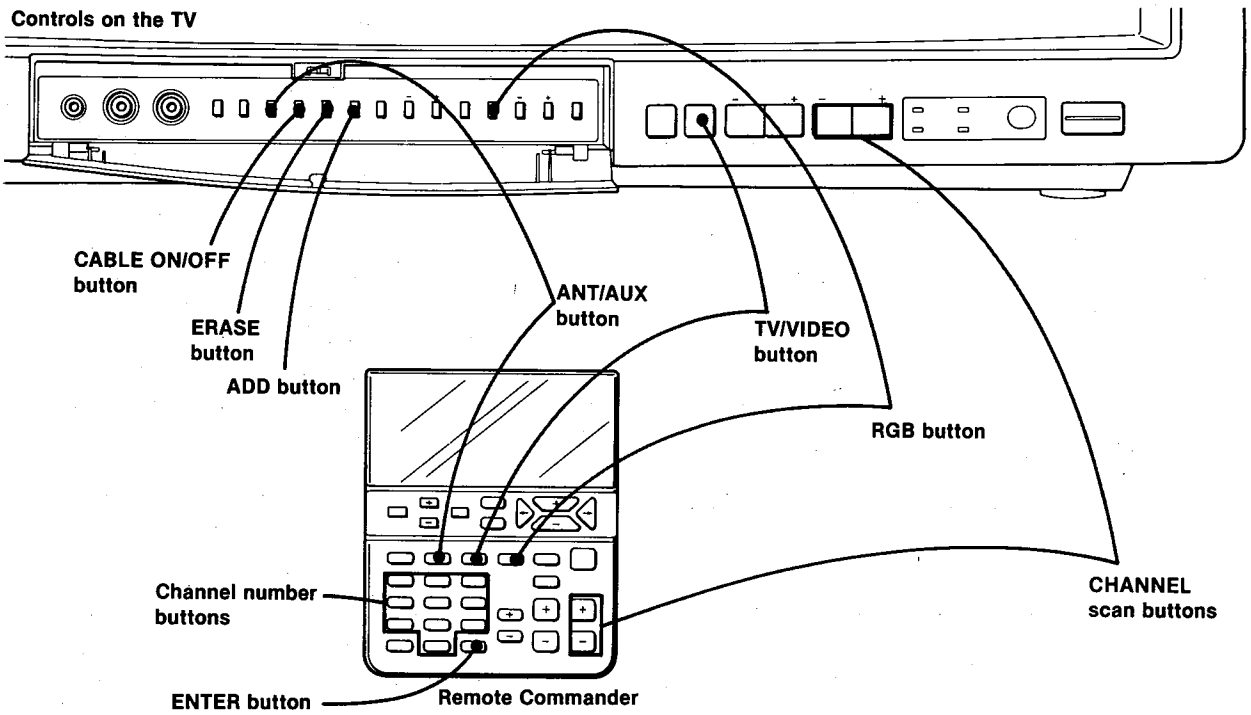
2 Press LEVEL +(R)/–(L) button to adjust the selected item.

	Selected item	–/(L) button	+/(R) button
PICTURE ADJUSTMENT	HUE	Skin tones become purplish	Skin tones become greenish
	COLOR	For less color intensity	For more color intensity
	BRIGHT	For less brightness	For more brightness
	SHARP	For less sharpness	For more sharpness
SOUND ADJUSTMENT	TREBLE	To decrease treble response	To increase treble response
	BASS	To decrease bass response	To increase bass response
	BALANCE	To emphasize the left speaker's volume	To emphasize the right speaker's volume

On-screen color-bar displays
When any of the above adjustments are made, a colored segmented bar appears on the screen to indicate the appropriate setting level.

- The HUE setting is indicated by the ratio of the red (left) and green (right) segments.
- The COLOR level is indicated by the number of red segments.
- The BRIGHT, SHARP, TREBLE and BASS levels are indicated by the number of green segments.
- The stereo BALANCE is indicated by the ratio of the green (left) and red (right) segments.
- While the VOLUME or PICTURE button is pressed, the number of green segments show the sound or picture level.

1-5. PRESETTING CHANNELS



Receivable channels of your set are:
VHF: 2–13
UHF: 14–69
CATV: 1–125
By adding and erasing channels, you can preset your TV so that only the desired channels appear in sequence when the CHANNEL +/– are pressed.

PREPARATION

1 Turn on TV.
2 Make sure the following are properly set.
On-screen "VIDEO 1, 2 or 3", "EXT-A" or "RGB" indicators and the RGB or VIDEO lamp should be off. (Press TV/VIDEO button or RGB button as necessary until they go out.)
3 According to the channel to be added or erased, check the following and make the necessary changes if any.
- CABLE ON/OFF button
  For VHF and UHF channels, set to OFF ⊓.
  For cable TV channels, set to ON ⊔.
- On-screen "AUX" indicator
  (Press ANT/AUX button as necessary.)
  For VHF, UHF and regular cable TV channels:
  The indicator should be off.
  For pay cable TV channels:
  The indicator should be displayed.

ADDING CHANNELS

1 Select the channel to be added by pressing the channel number buttons and then ENTER.
2 Press ADD.
A "+" indication will appear on the left of the channel display on the screen, indicating that the channel will appear in the proper numerical sequence when you press CHANNEL +/–.
Repeat steps **1** and **2** for other channels to be added.

ERASING CHANNELS

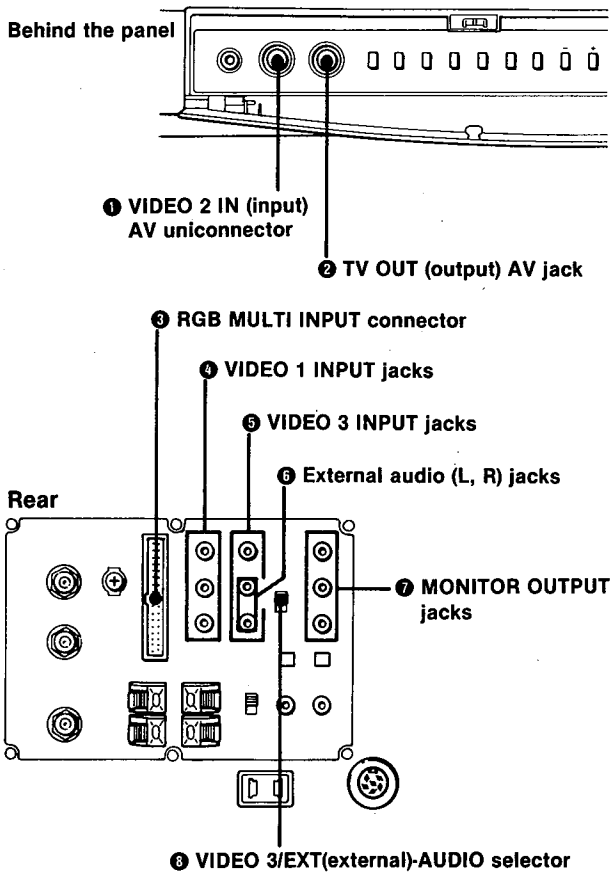
1 Select the channel to be erased.
2 Press ERASE.
A "–" indication will appear on the left of the channel display on the screen, indicating that the channel has been erased. When CHANNEL +/– are pressed, you will see that the channel is skipped over in the numerical sequence.
Repeat steps **1** and **2** for other channels to be erased. To add erased channels again, follow the steps in "ADDING CHANNELS".

Note
You cannot erase a VHF or UHF channel from the memory and retain a cable TV channel which has the same number, or vice versa. If either a VHF/UHF channel or a cable TV channel with the same number is to be kept in the memory, do not erase the number.

1-6. APPLICATIONS WITH OTHER OPTIONAL EQUIPMENT

This unit is equipped with various input/output jacks and terminals for your desired equipment to be connected.
For details on the various optional connecting cables to be used, see "OPTIONAL AUDIO/VIDEO CONNECTING CABLES" on page 13.

Front


Behind the panel
❶ VIDEO 2 IN (input) AV uniconnector
❷ TV OUT (output) AV jack
❸ RGB MULTI INPUT connector
❹ VIDEO 1 INPUT jacks
❺ VIDEO 3 INPUT jacks
❻ External audio (L, R) jacks
Rear
❼ MONITOR OUTPUT jacks
❽ VIDEO 3/EXT(external)-AUDIO selector

❶ VIDEO 2 IN (input) AV uniconnector (AV jack)
Connect to the video and audio output jacks of a video cassette recorder or microcomputer. Video and audio signals are transmitted simultaneously.

❷ TV OUT (output) jack (AV jack)
Connect to the video and audio input jacks of a video cassette recorder to record the output of the TV's built-in tuner. The TV tuner output will always be supplied even while other input signals are being viewed on the screen.

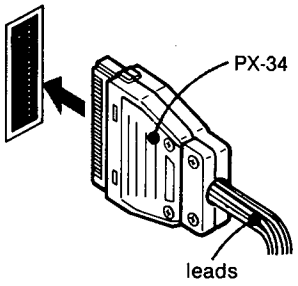
To record a TV program while viewing another video source

1 Select the TV channel you desire to record.
2 Start recording on the VCR.
3 Press either TV/VIDEO button or RGB button to select the desired source to be displayed.

Note

- The TV channel (and therefore the output of this jack) will change if you press the channel number or CHANNEL scan buttons even while the on-screen "RGB" indicator or RGB lamp is lit.
- The TV channel cannot be changed when the on-screen "VIDEO" indicator or VIDEO lamp is lit.

❸ RGB MULTI INPUT connector (34-pin jack)
This connector allows direct RGB hook-up to a microcomputer having RGB output.
When connecting the microcomputer, use a connecting cable with a 34-pin plug that will match the RGB output of the equipment to the pin assignment of this connector designated on page 2.



To connect a cable with loose signal leads instead of a plug, use an optional PX-34 RGB multi connector. For details on the arrangement and the connection of the leads, read the instruction manual of the PX-34.

❹ VIDEO 1 INPUT jacks
❺ VIDEO 3 INPUT jacks
Connect to the video and audio output jacks of a VCR*, video disc player, etc.

VIDEO jack (phono, yellow)	→	to video output jack
AUDIO L jack (phono, white)	→	to audio L (left channel) output jack
AUDIO R jack (phono, red)	→	to audio R (right channel) output jack

If you connect an audio source to the AUDIO L jack only, you will be able to hear the monaural sound received through this jack from both speakers.

*You will achieve better picture and sound quality than by connecting the VCR only to the antenna terminal.

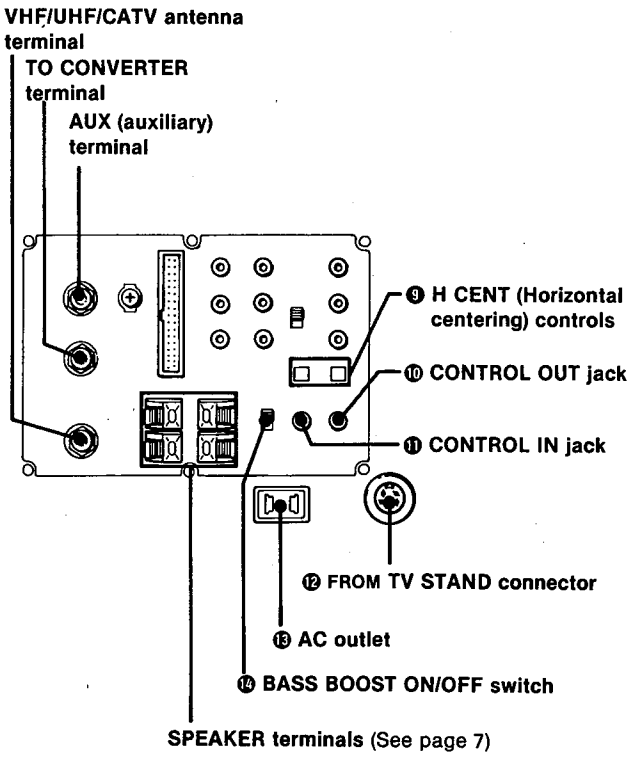
❻ External audio (L/R) jacks
An external audio source can be connected to these jacks to be combined with the picture of the selected TV program. Connect to the audio/line output of the audio source.

To view FM simulcasted programs.

❼ MONITOR OUTPUT jacks (phono type)
Connect to the video and audio input jacks of a video cassette recorder or color monitor. Either the TV or VCR signal selected by the TV/VIDEO button is supplied.
To record only the sound, connect the audio input jacks of a tape recorder to the AUDIO L and R jacks with a connecting cable such as the optional RK-74A.

Note
The RGB signals are not supplied (and therefore will not be recorded on the connected VCR) from these jacks even when the RGB signals are displayed on the screen.

❽ VIDEO 3/EXT(external)-AUDIO selector
If you have connected a VCR, video disc player, etc., to the VIDEO 3 INPUT jacks, set to "VIDEO 3".
If you desire to mix the sound of the external audio source connected to the ❻ External audio jacks with the picture of the TV program, set to "EXT-AUDIO".


VHF/UHF/CATV antenna terminal
TO CONVERTER terminal
AUX (auxiliary) terminal
❾ H CENT (Horizontal centering) controls
❿ CONTROL OUT jack
⓫ CONTROL IN jack
⓬ FROM TV STAND connector
⓭ AC outlet
⓮ BASS BOOST ON/OFF switch
SPEAKER terminals (See page 7)

❾ H CENT (horizontal centering) controls
When a microcomputer is connected to the TV at the RGB MULTI IN connector, the display may be shifted off center to the left or right of the screen.
In this case, center the display by pressing one of the two buttons. The newly set position will be memorized when the button is released, but cancelled when the power is turned off. If both buttons are pressed simultaneously after the proper position is set, the newly set position will be memorized even after the power is turned off. ("H CENT" will appear momentarily on the screen indicating that it will still be memorized.)
When the RESET button is pressed, this adjustment will return to the factory preset level together with the other picture adjustments.

❿ ⓫ CONTROL IN/OUT jacks
These jacks are for connecting a future audio or video product also equipped with similar CONTROL IN or OUT jacks for the expansion of your audio-video system.
If you connect the CONTROL OUT jack to the CONTROL IN jack of a Betamax remote control VCR, you will not only be able to control the VCR through the remote control detector of this TV but also preset timer recordings and playback of the VCR with the HMH system.

⓬ FROM TV STAND connector (6-pin DIN)
Connect the optional SU-171 TV stand which will enable you to turn on and off the power, adjust the volume, and select the channel of this TV with foot pedals.

⓭ AC outlet
Provides ac power of 100 W max., for connecting microcomputers.
Caution: Do not connect electrical home appliances such as an electric iron, fan, VTR, audio component, or other high-wattage equipment to this outlet.

⓮ BASS BOOST ON/OFF switch
When the supplied side-mounting speakers are used, set this switch to ON to enhance the bass sound.
When a larger speaker system is used, set this switch to OFF to prevent excessive bass.

1-7. CONNECTIONS

OPTIONAL AUDIO/VIDEO CONNECTING CABLES

The optional connecting cables to be used for connecting other equipment depend upon what type of audio and video jacks the equipment you desire to connect has. The following charts will help you choose which cable you should use.

Cables to be connected to the VIDEO 1 and 3 INPUT jacks

The type of audio and video jacks of the equipment to be connected.		Connecting cable to be used
Video (phono-type)	Audio (L, R) (phono-type)	VMC-1P3 (1 m)* (supplied)
Video (phono-type)	Audio (mini-type)	VMC-1MP3 (1 m), -2MP3 (2m)
Video (phono-type)	Audio (phono-type)	VMC-609MS

*Use the optional VMC-2P3 (2 m) if the cable is too short.

Cables to be connected to the VIDEO 2 IN and TV OUT (AV type) jacks

The type of audio and video jacks of the equipment to be connected.		Connecting cable to be used
Video (phono-type)	Audio (L, R) (phono-type)	VMC-610S
Video (phono-type)	Audio (phono-type)	VMC-612MS * *The PC-21 is supplied to the cable for a mini-type audio input.

The following are few examples of the possible connections.

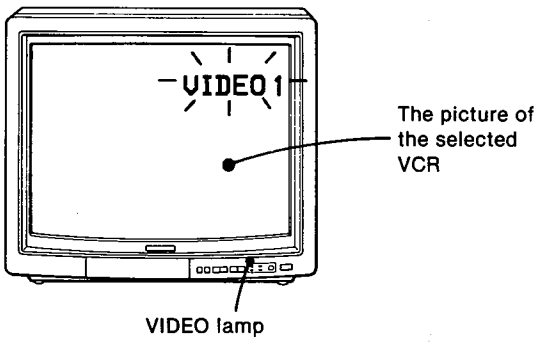
NOTES ON CONNECTION

- Before connecting, make sure that the power to each piece of equipment is turned off.
- The plugs should be fully inserted into the jacks. A loose connection may cause hum and noise.
- Match the color when connecting the plugs to the jacks.

1-8. SELECTING THE VARIOUS AUDIO AND VIDEO SOURCES

VIEWING THE PICTURE OF THE EQUIPMENT CONNECTED TO THE VIDEO 1/3 INPUT or VIDEO 2 IN UNICONNECTOR

(If the "RGB" indicator is lit, press RGB button to turn it off.)
Press the TV/VIDEO button until the "VIDEO 1, 2 or 3" indicator of the VIDEO input jacks from which you desire the signals to come from appears.
The VIDEO lamp will light up.



Every time you press the TV/VIDEO button, the display will change as follows:

VIDEO 1 → VIDEO 2 → VIDEO 3* → TV channel

Adjust the volume with the VOLUME buttons.

*Set VIDEO 3/EXT-AUDIO selector on the rear panel to "VIDEO 3" if "EXT-A" appears.

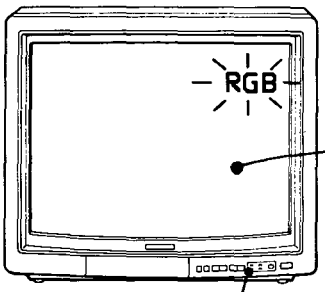
The channel number buttons on the Remote Commander or the channel scan buttons will not function while the VIDEO lamp is lit.

TO LISTEN TO THE SOUND OF THE AUDIO SOURCE CONNECTED TO THE EXTERNAL AUDIO JACKS

1 Set VIDEO 3/EXT-AUDIO selector to "EXT-AUDIO".
2 Press TV/VIDEO button as many times as necessary until the on-screen "EXT-A" appears.

VIEWING THE DISPLAY OF THE EQUIPMENT CONNECTED TO THE RGB MULTI INPUT CONNECTOR

Press the RGB button to display the "RGB" indicator. The RGB lamp will light up.



The picture of the connected equipment

RGB lamp

Adjust the volume with the VOLUME buttons.

Viewing superimposed pictures

If the equipment connected to the RGB MULTI INPUT connector has a function of superimposing its RGB output on TV programs or on other video sources and you desire to view the superimposed picture,

1 Take the necessary steps to set the connected equipment into the superimposing mode. (For details, read the instruction manual of the connected equipment.)
2 Select the VIDEO 1, 2 or 3 or the TV mode with the TV/VIDEO button to select the input on which you desire to have the RGB input superimposed.
3 Press the RGB button so that the on-screen "RGB" indicator or the RGB lamp is lit.

To return to the normal TV program or to the picture of the VCR, press RGB again.

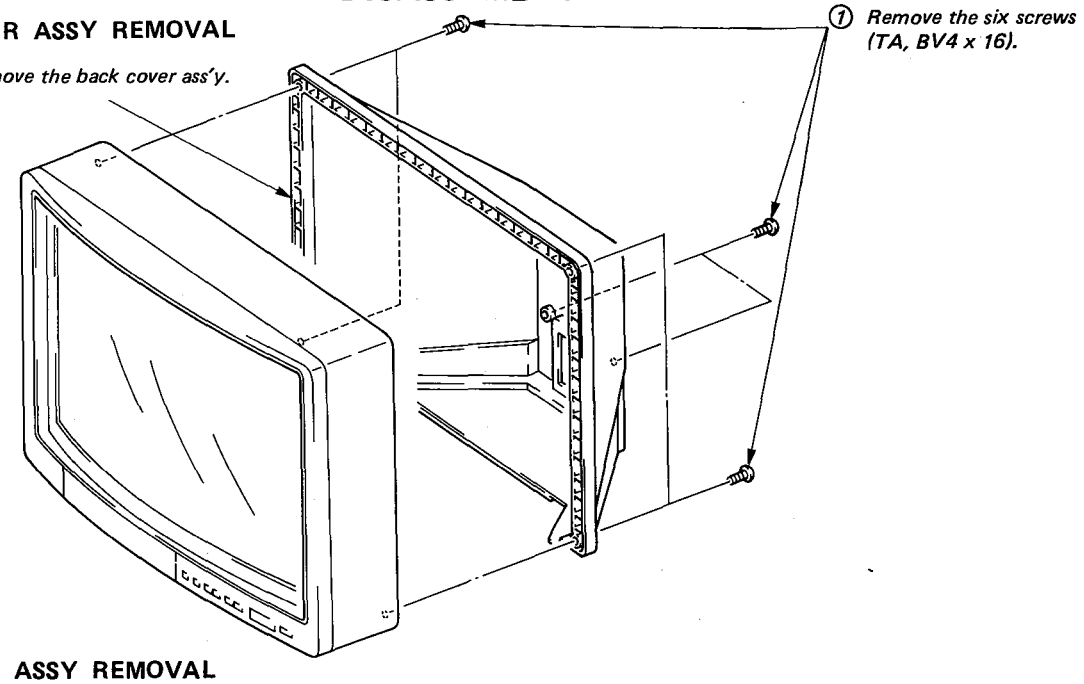
To have the indicators remain on the screen, press the DISPLAY button on the Remote Commander. When the RGB input is superimposed on TV programs or on the VCR display, the selected channel or VIDEO 1, 2 or 3 indicator will appear for a few seconds first.

Notes

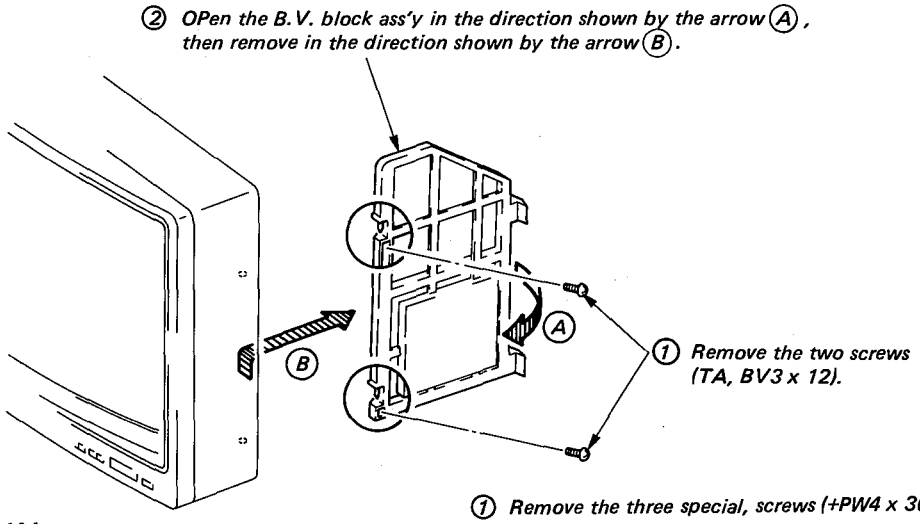
- The HUE, COLOR and SHARP (sharpness) adjustments are non-effective for the displayed RGB input. Adjust the picture with the PICTURE buttons or by adjusting the BRIGHT (brightness).
- The selected source is retained even when the power is turned off once.

SECTION 2
DISASSEMBLY

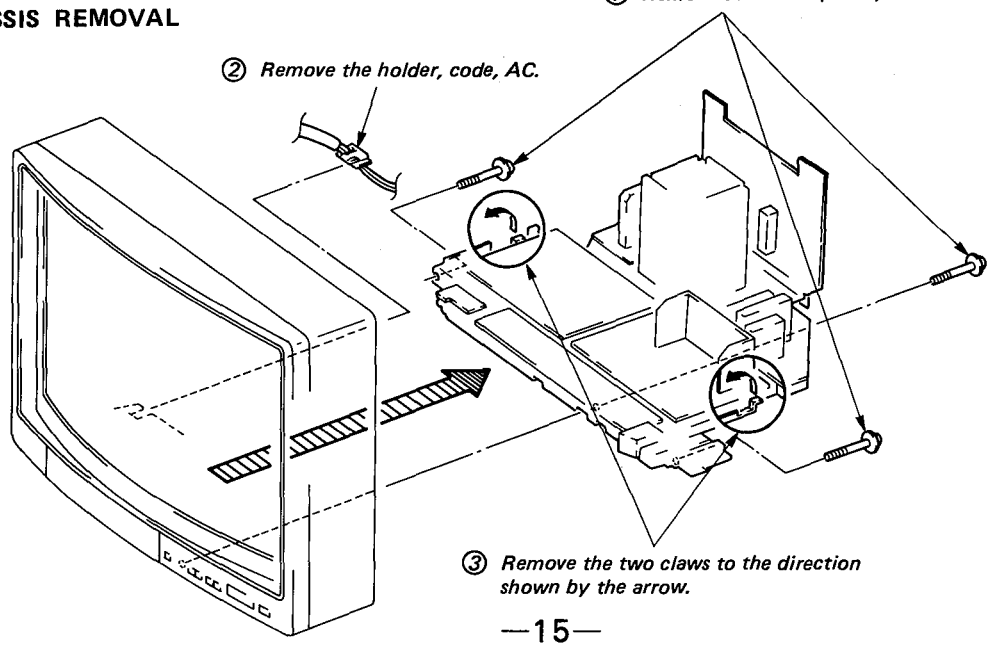
2-1. BACK COVER ASSY REMOVAL



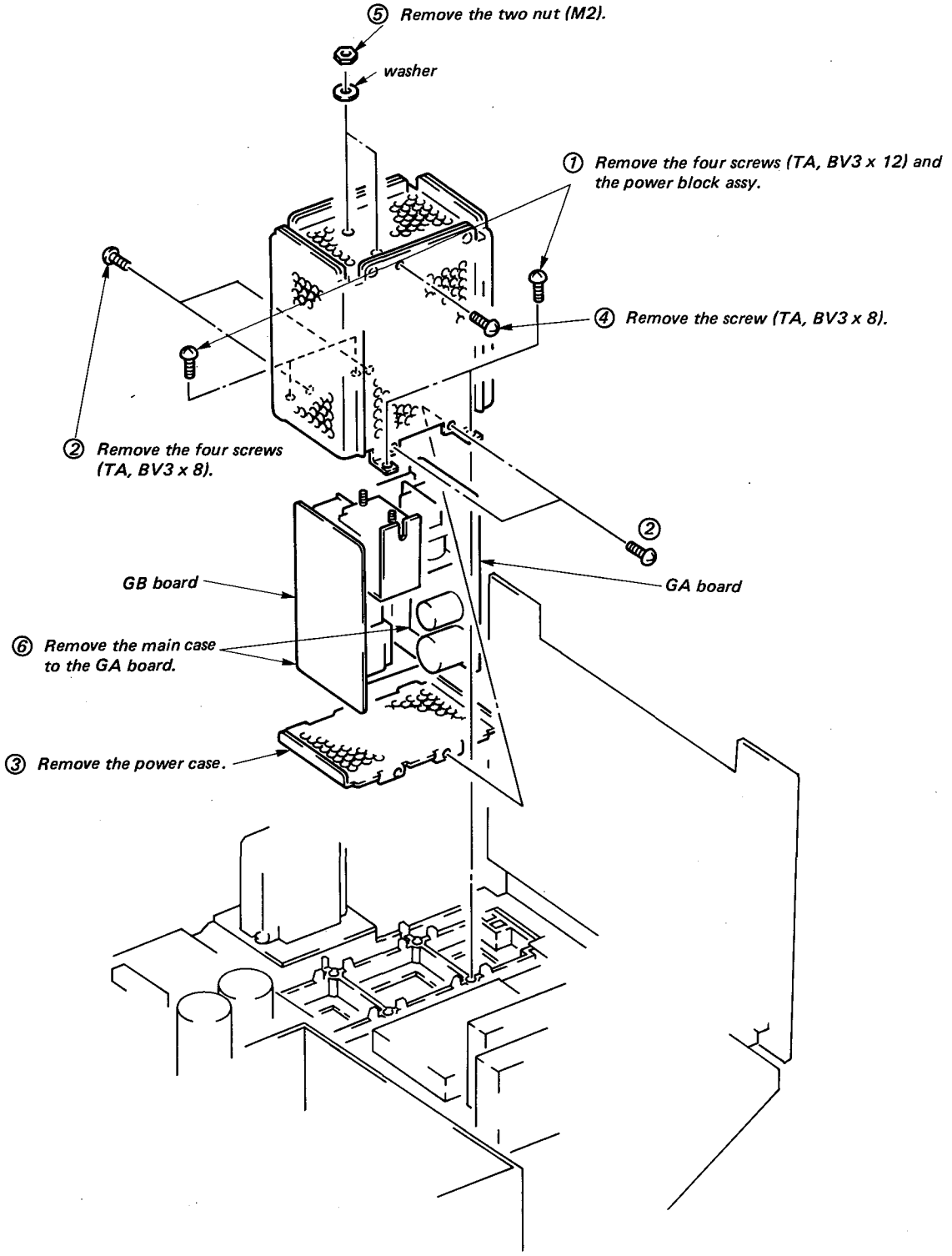
2-2. B.V. BLOCK ASSY REMOVAL


② OPen the B.V. block ass'y in the direction shown by the arrow (A), then remove in the direction shown by the arrow (B).
A
B
① Remove the two screws (TA, BV3 x 12).

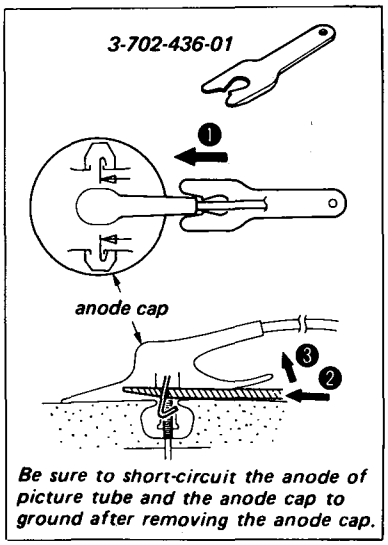
2-3. CHASSIS REMOVAL

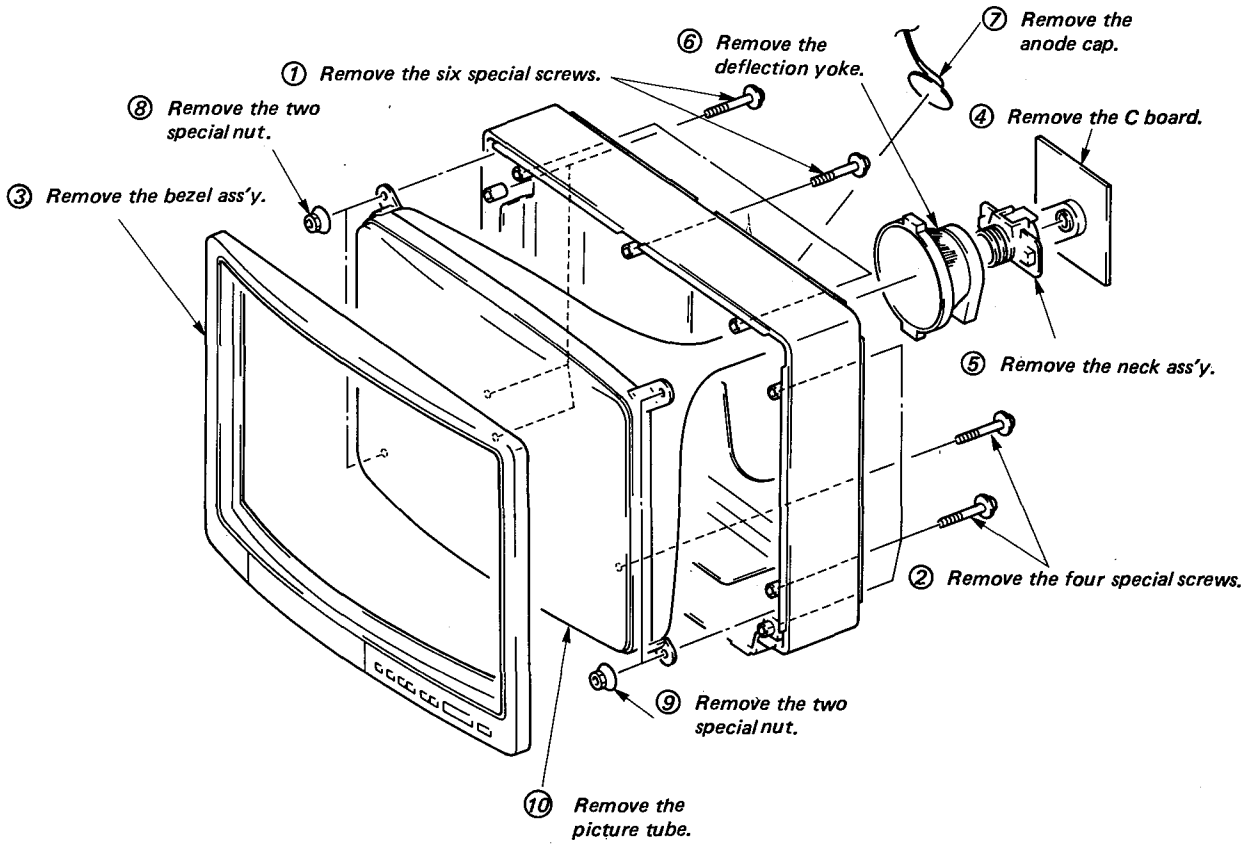

① Remove the three special, screws (+PW4 x 30).
② Remove the holder, code, AC.
③ Remove the two claws to the direction shown by the arrow.

2-4. POWER BLOCK ASSY REMOVAL


⑤ Remove the two nut (M2).
washer
① Remove the four screws (TA, BV3 x 12) and the power block assy.
④ Remove the screw (TA, BV3 x 8).
② Remove the four screws (TA, BV3 x 8).
②
GB board
GA board
⑥ Remove the main case to the GA board.
③ Remove the power case.

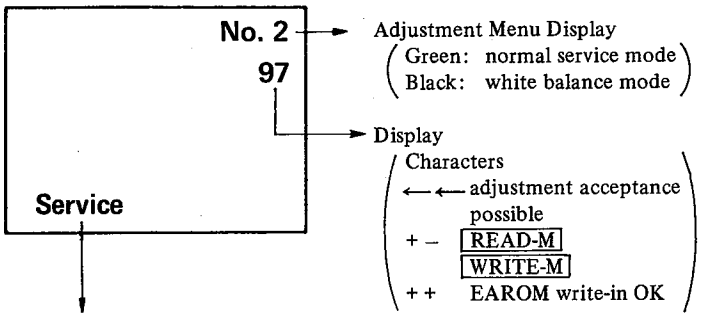
2-5. PICTURE TUBE REMOVAL


3-702-436-01
anode cap
Be sure to short-circuit the anode of picture tube and the anode cap to ground after removing the anode cap.


⑦ Remove the anode cap.
⑥ Remove the deflection yoke.
① Remove the six special screws.
⑧ Remove the two special nut.
④ Remove the C board.
③ Remove the bezel ass'y.
⑤ Remove the neck ass'y.
② Remove the four special screws.
⑨ Remove the two special nut.
⑩ Remove the picture tube.

SECTION 3
ADJUSTMENTS

3-1. SCREEN DISPLAY IN SERVICE MODE

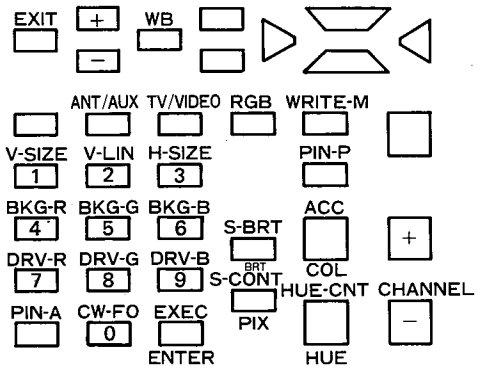


The following settings are for service mode:

Brightness	68%
Color depth	50%
Picture	50%
Hue	50%
Sharpness	50%

("Color depth" is 0% in white balance mode.
Brightness is 0% in sub-bright mode.)

3-2. SERVICE MODE FUNCTIONS USING USER COMMANDER



3-3. SERVICE MODE TABLE FOR RM-727 USER COMMANDER

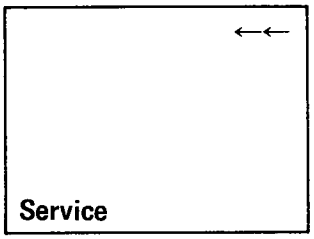
(B board service switch (S2001) ON)

* Keys relating to CANVAS should not be operated.

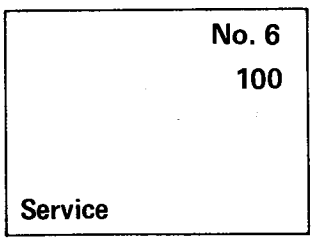
User (KEY)	Service Function (KEY)	Menu ( )
Muting	READ-M	23
Sleep	WRITE-M	24
Level adj. (right)	+	
Level adj. (left)	–	
Standard	EXIT	
Function selection	W/B	9
1	V-SIZE	2
2	V-LIN	4
3	H-SIZE	6
4	BKG-R	10
5	BKG-G	11
6	BKG-B	12
7	DRIVE-R	14
8	DRIVE-G	15
9	DRIVE-B	16
10	CW-F0	13
12	EXEC	
PIC +	S. BRT	17
PIC –	S. CONT	19
VOL +	ACC	18
VOL –	HUE CENT	20
Channel display	PIN-A	7
Multiplex	PIN-P	8
CH +	CH +	
CH –	CH –	
TV/Video	TV/Video	
RGB	RGB	

3-4. USING THE USER COMMANDER

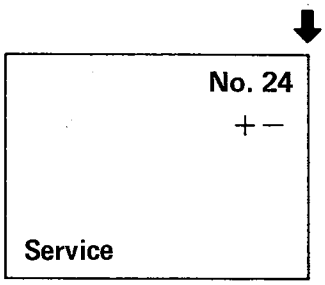
Example: H SIZE



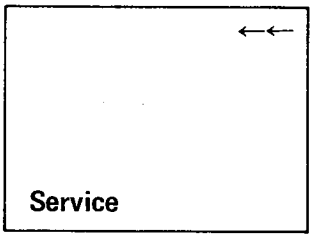
1. Service mode switch (S2001) ON.
2. Set power supply ON.
   READ-M "ON"
   EXEC "ON"



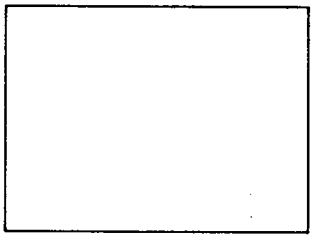
1. H SIZE "ON"
2. Adjust using +, –.



1. WRITE-M "ON" (+ –)
2. EXEC "ON" (+ –)

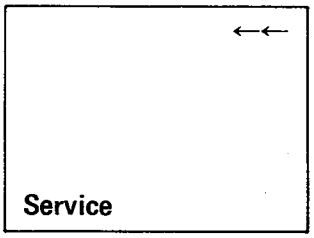


Data write-in completed

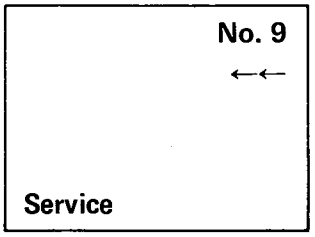


1. EXIT "ON".
2. Service mode switch (S2001) OFF
   Normal TV mode

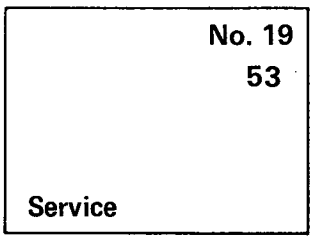
3-5. WHITE BALANCE ADJUSTMENT USING USER COMMANDER



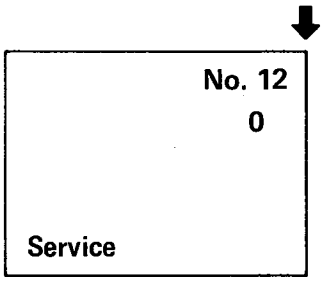
1. Service mode switch (S2001) ON
2. Power supply ON



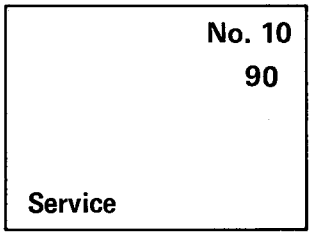
1. WB "ON"
   Mode display at this time is black.



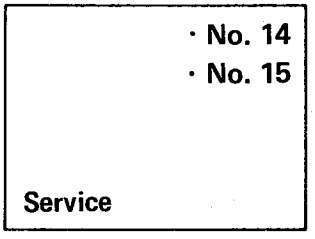
1. S. CONT "ON"
2. + – set at "53"



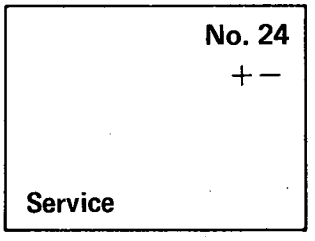
1. DRV-B "ON"
2. + – set at "0"



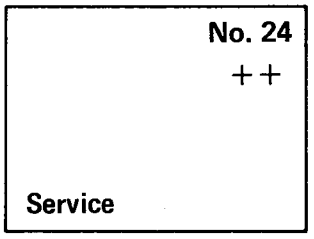
1. BKG-R "ON"
2. + – set at "90"



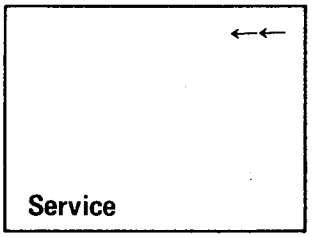
1. DRV-G, DRV-R
2. Adjust in No. 14 and No. 15 modes with the +, – buttons.



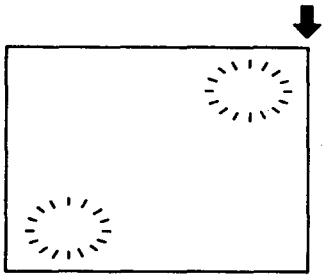
1. WRITE "ON" (+ –)



1. EXEC "ON" (+ +)



1. WB
   When WB is turned ON, ← ← mode changes from B/W ← ← to green ← ←.



EXIT "ON"
Normal TV mode

3-6. SETUP ADJUSTMENTS

DYNAMIC CONVERGENCE Adjustment

Preparation:

- **Before starting, perform Horizontal and Vertical Static Convergence Adjustment.**

1. **Loosen deflection yoke screw.**
2. **Remove deflection yoke spacers.**
3. Move the deflection yoke for best convergence.
4. **Tighten the deflection yoke screw.**
5. **Install the deflection yoke spacers.**
6. Adjust the Y.CROSS (RV502) and Y. BOW (RV501), so that RED and BLUE shown in Fig.-1 will become a=b=c.

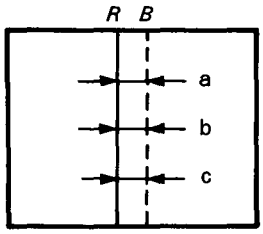


Fig. 1

7. Match the horizontal convergence at the center of the screen with H STAT VR.
8. Adjust the CORNER BOW (RV503), so that RED and BLUE shown in Fig.-2 will become a=b=c and d=e=f.

Note: At this point, if the relationship between a=c or d=f is not established, adjust the Y • CROSS (RV502) again.

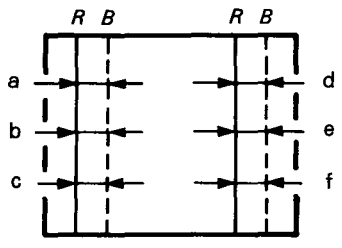


Fig. 2

9. Match the horizontal convergence at the center of the screen with the H STAT VR.
10. Adjust the H TILT (RV500) so that the RED and BLUE shown in Fig.-3 will become a=b.

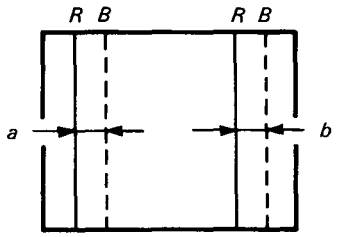


Fig. 3

11. Adjust the H AMP (RV504) so that the RED and BLUE shown in Fig.-4 will become 2=2b.

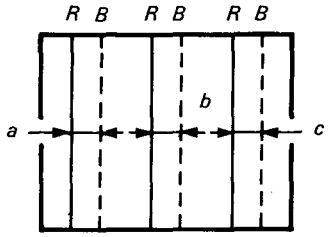


Fig. 4

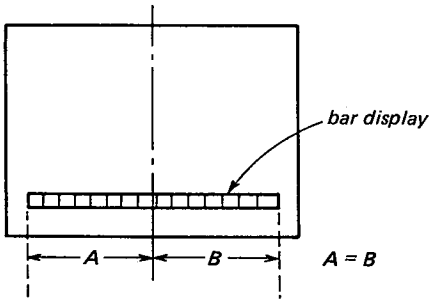
12. Match the horizontal convergence at the center of the screen with the H STAT VR.
13. When the H AMP is adjusted repeat the procedures described in Steps 5 to 7.
14. If divergence of the convergence exists at the corner of the screen, the adjustments described in Steps after 3 should be repeated.

BAR DISPLAY POSITION Adjustment

1. Input a crosshatch signal.

   PICTURE VR MAX
   BRT VR 50%

2. Adjust bar display with L102 as shown in figure.



SCREEN (G_2) Adjustment

Supply 180V DC to the R. G. B cathode voltage and adjust with G_2 VR (RV701) immediately prior to the disappearing of the luminscent line.

WHITE BALANCE Adjustment

1. Input the white signal and service switch (S2001) to ON.

Adjust mode	Display NO	Adjust NO

WB	(9)
S. CONT	(19) (53) [+], [−] set at "53"
DRV-R	(12) (53) [+], [−] set at "53"
DRV-R DRV-G	(14) Adjust white balance (15) with [+] or [−] button.
WIRTE-M	(24)+ −
EXEC	(24) + +

(MEMORY OK)

2. (Cut-off mode)

Adjust mode	Display NO	Adjust NO

WB	(9)
S. CONT	(19) (15)
S. BRT	(17) (0)
BKG-R	(10) (90)
BKG-G BKG-B	(11) Adjust white balance (12) with [+] or [−] button
WRITE-M	(24)+ −
EXEC	(24)+ +

(MEMORY OK)

3. Input a B/W signal and adjust so that the dark portion glows faintly during cut-off, with [S. BRT] mode.

FOCUS Adjustment

Adjust FOCUS control on the flyback transformer for a best focus.

CW fo Adjustment

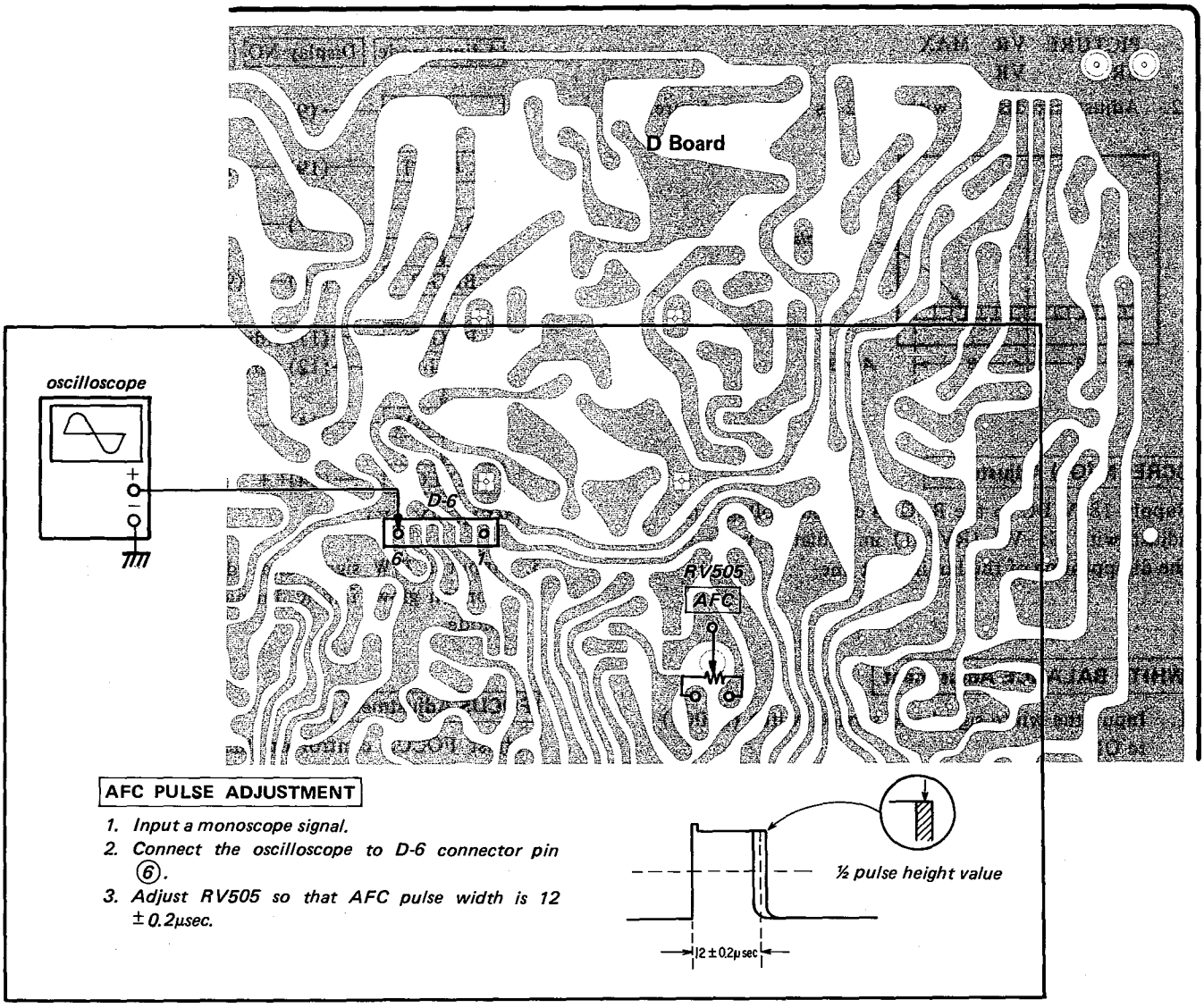
1. Input a color bar signal.
2. With power supply switch OFF, turn the "service switch" (S2001) mounted on the B board ON.
3. Turn the power switch ON. Check that the words "service" is displayed on the screen at this time.
4. With RM-727 "Service Key".

READ-M	
	ON
EXEC	
	ON
CW-FO	

5. Check that "No. 13" and the current value are displayed in the upper right section of the screen.
6. While observing the screen, adjust by pressing the [+] or [−] button so that "color flow" stops or shifts horizontally.

3-7. CIRCUIT ADJUSTMENTS

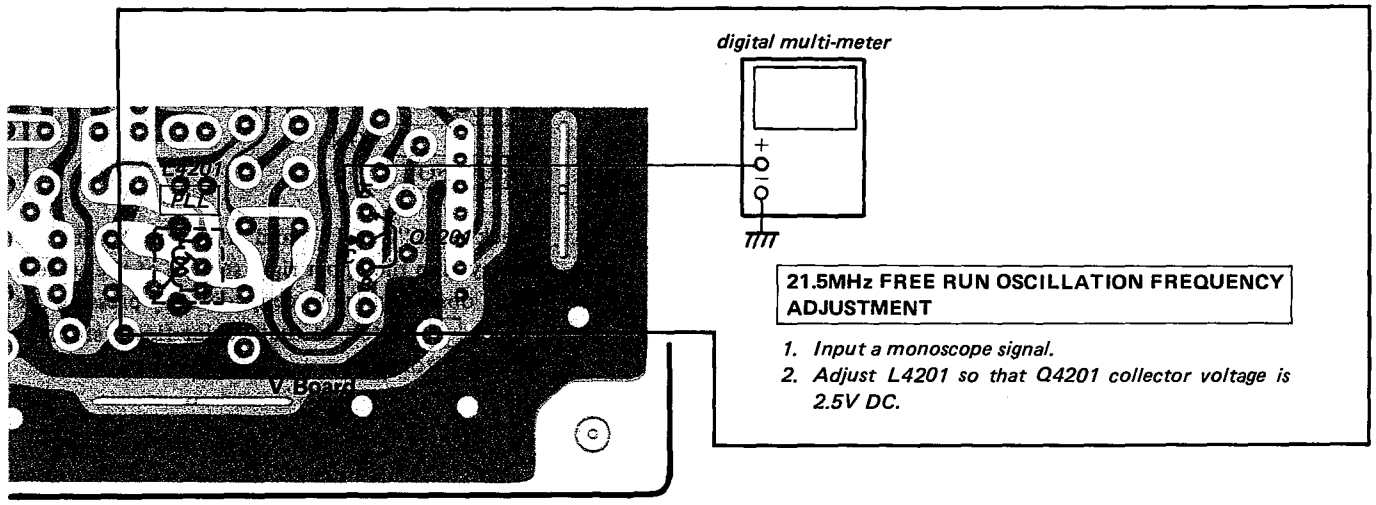
3-7-1. D Board Adjustment



AFC PULSE ADJUSTMENT

1. *Input a monoscope signal.*
2. *Connect the oscilloscope to D-6 connector pin ⑥.*
3. *Adjust RV505 so that AFC pulse width is 12 ± 0.2μsec.*

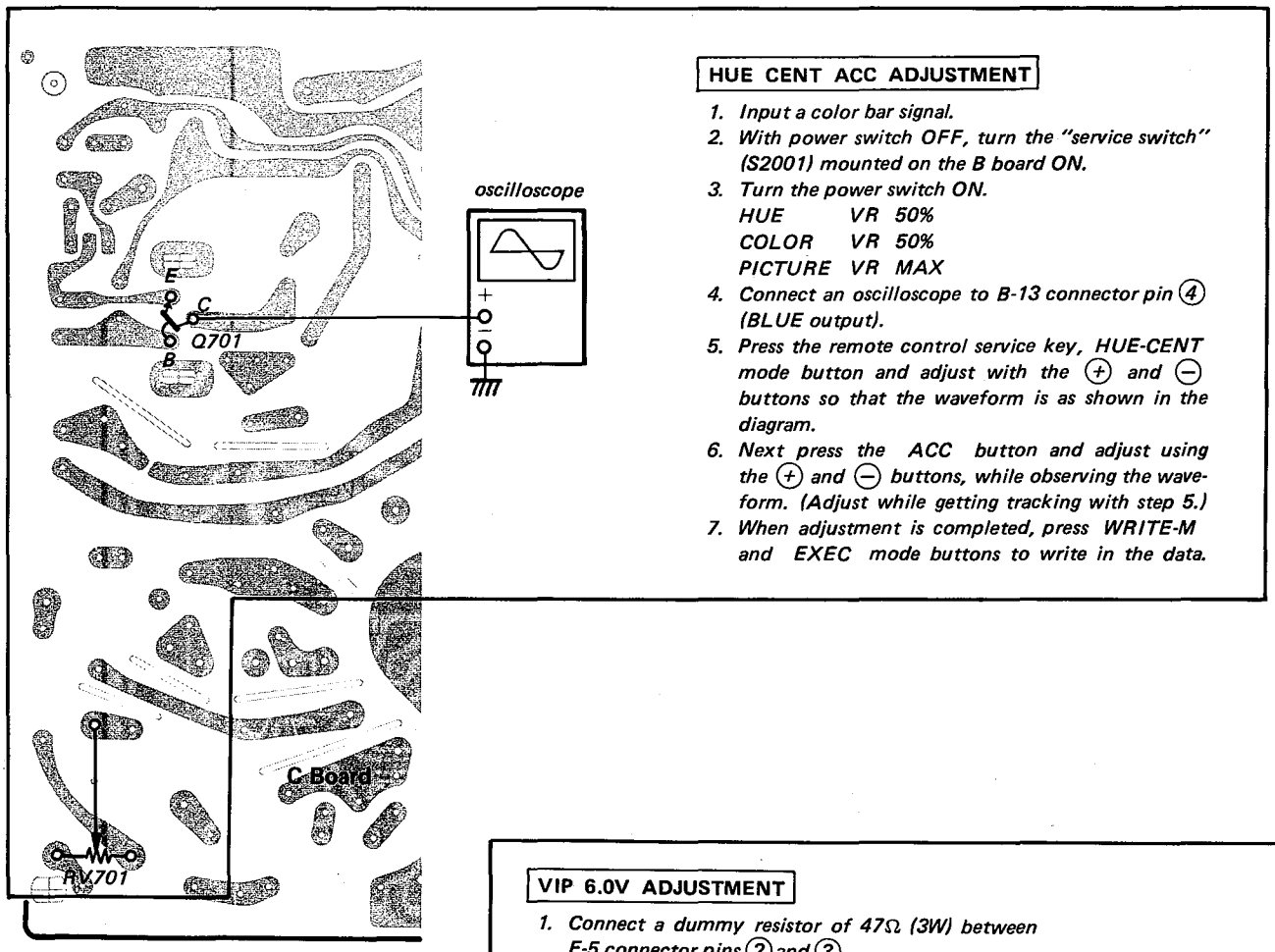
3-7-2. V Board Adjustment



21.5MHz FREE RUN OSCILLATION FREQUENCY ADJUSTMENT

1. *Input a monoscope signal.*
2. *Adjust L4201 so that Q4201 collector voltage is 2.5V DC.*

3-7-3. C Board Adjustment



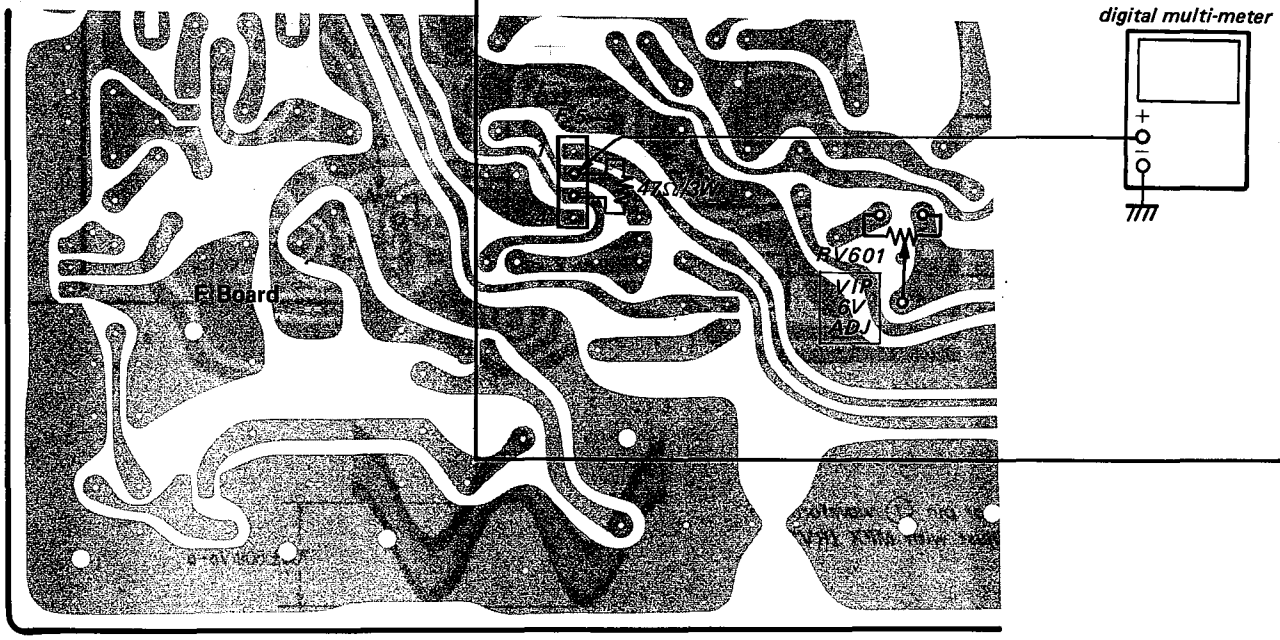
HUE CENT ACC ADJUSTMENT

1. *Input a color bar signal.*
2. *With power switch OFF, turn the "service switch" (S2001) mounted on the B board ON.*
3. *Turn the power switch ON.*
   HUE VR 50%
   COLOR VR 50%
   PICTURE VR MAX
4. *Connect an oscilloscope to B-13 connector pin ④ (BLUE output).*
5. *Press the remote control service key, HUE-CENT mode button and adjust with the ⊕ and ⊖ buttons so that the waveform is as shown in the diagram.*
6. *Next press the ACC button and adjust using the ⊕ and ⊖ buttons, while observing the waveform. (Adjust while getting tracking with step 5.)*
7. *When adjustment is completed, press WRITE-M and EXEC mode buttons to write in the data.*

VIP 6.0V ADJUSTMENT

1. *Connect a dummy resistor of 47Ω (3W) between F-5 connector pins ② and ③.*
2. *Input AC 100V, and adjust RV601 so that the voltage between F-5 connector pins ② and ③ is 6.0 ± 0.05V DC.*

3-7-4. F Board Adjustment

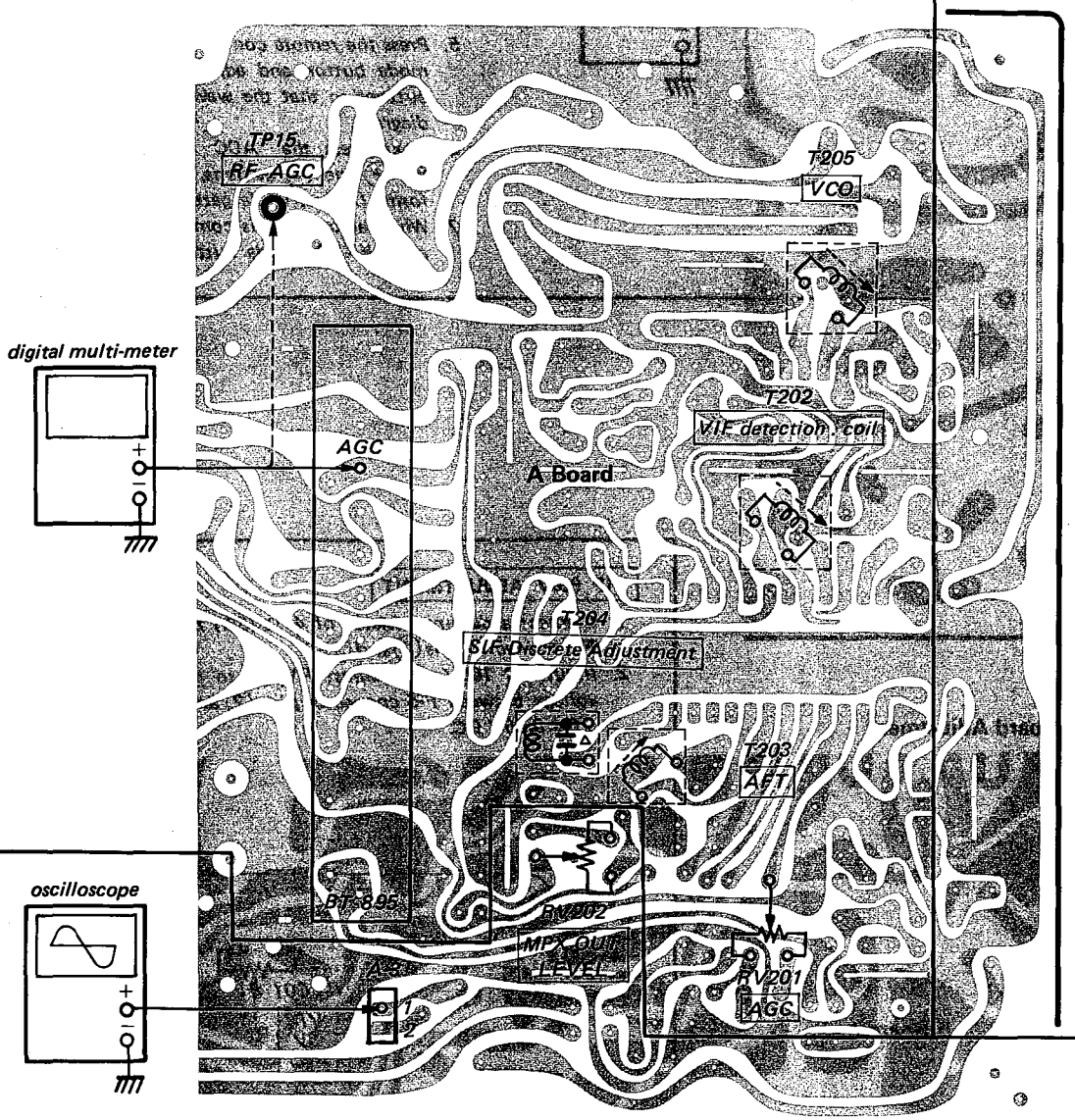


3-7-5. A Board Adjustments

TUNER AGC ADJUSTMENT

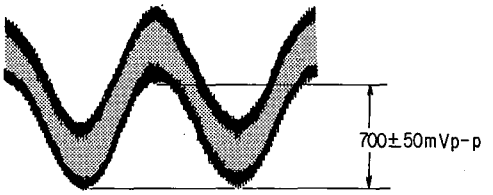
VHF RF AGC Adjustment

1. *Input a color bar signal. (RF signal)*
   PICTURE, BRT: normal
2. *Adjust with TU AGC (RV201) so that there is no noise, etc. in the picture, for optimum state. (*VHF TUNER AGC pin voltage should be 68dBμ/75Ω, about 6.5 – 7.0V when OPEN.)*

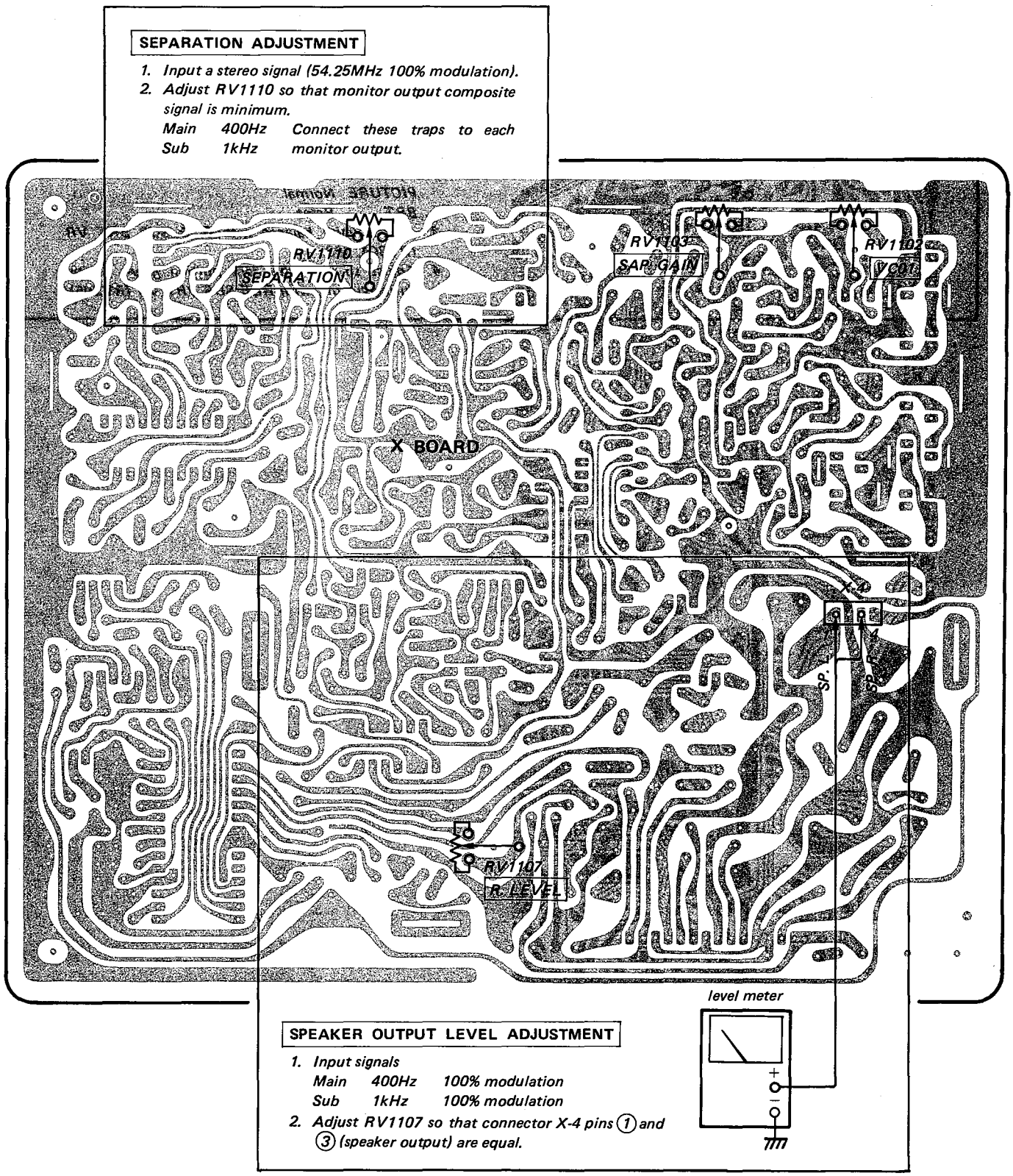


MPX ADJUSTMENT

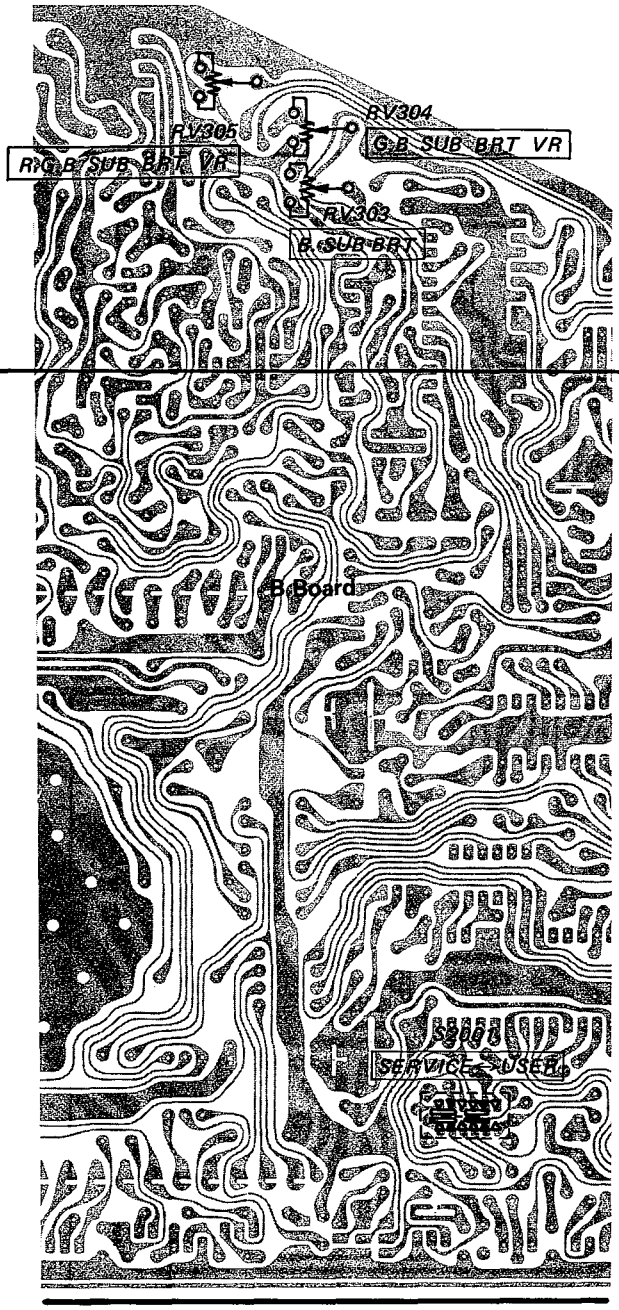
1. *Input a dot signal.*
2. *Observe the A-3 connector pin (1) waveform on the oscilloscope and adjust with MPX (RV202).*



3-7-6. X Board Adjustments



3-7-7. B Board Adjustment



RGB WHITE BALANCE

1. *In RGB mode, set the RGB multiconnector input switch to analog.*
2. *Input a B/W signal.*
   PICTURE Normal
   BRT Reset
3. *Adjust white balance with G. B SUB BRT VR (RV304, 303).*
4. *Adjust so that the dark portion glows faintly during cut-off, with RGB SUB BRT VR (RV305).*

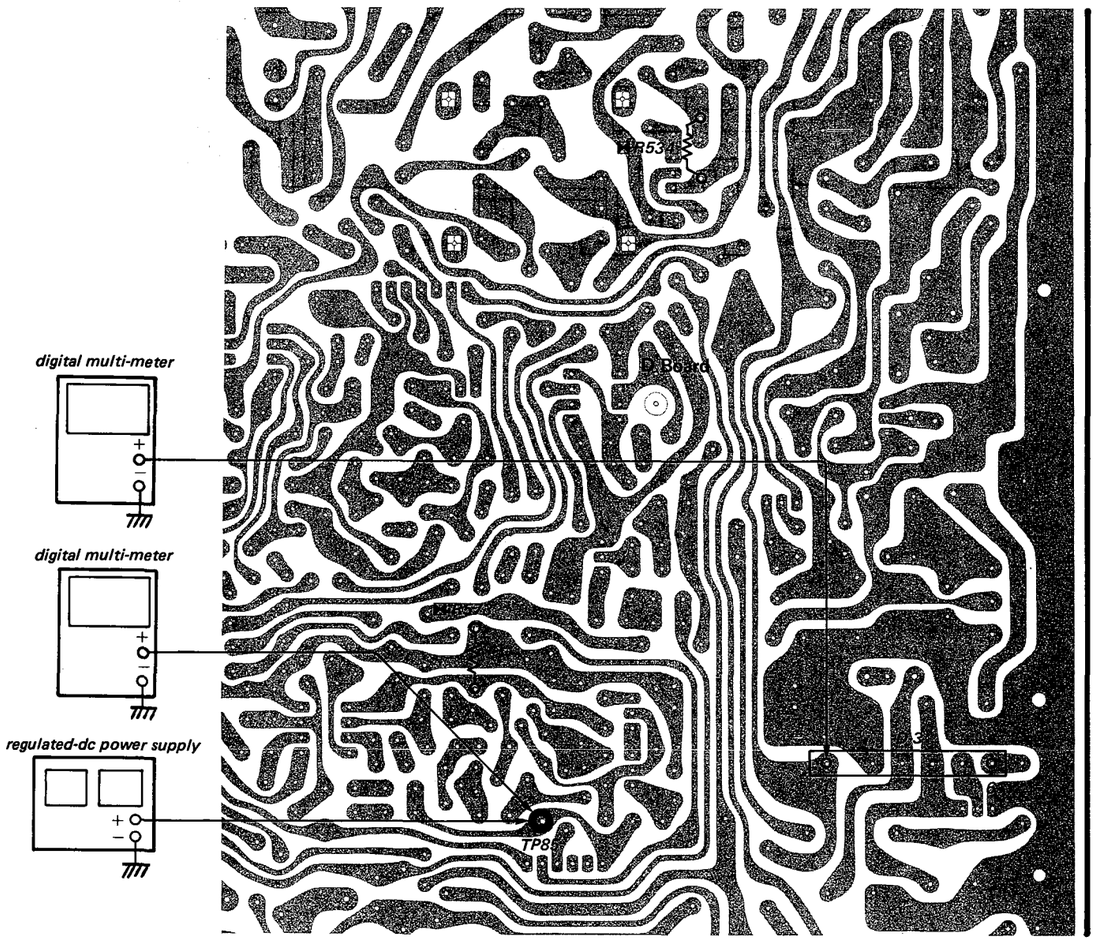
3-8. SAFETY RELATED ADJUSTMENTS

BLANKING CIRCUIT OPERATION CHECK (⊠ R534)

Be sure to perform this adjustment when replacing the following parts (marked ◪ on the schematic.)

Q713, Q714, D707, R728, R759, R760, R761, R762, R763, R770, R774, R775 } *on C board*
Q507, D500, D501, R532, R534, R536, R584 } *on D board*
Q2012, R2141, R2143, R2144 } *on B board*

1. *Input a monoscope signal.*
   picture, BRT } *MAX*
2. *Confirm that the BLANKING circuit operates when 125.5V DC is applied to +B line from an external power supply. (Raster goes not.)*



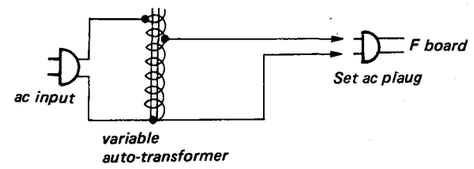
HOLD DOWN OPERATION CHECK (⊠ R573)

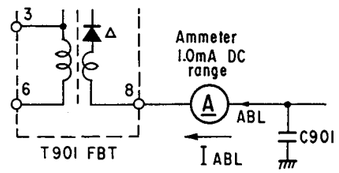
Be sure to perform this adjustment when replacing the following parts (marked ◪ on the schematic).

R533, R560, R570, R571, R572, R573, R574, R582, R583, R1500, R1502, R1503, R1504, R1522, R1530, D518, D522, Q512, Q514, Q515, IC500.

DETECTION VOLTAGE OPERATION CHECK

1. *Input a dot signal.*
   PICTURE, BRT MIN
   AC power 120V ± 2V AC
2. *Check that TP85 voltage value is 14.0 ± 1V DC.*
3. *Check that HOLD DOWN operates when 16.30 $^{+0}_{-0.05}$V DC is applied to TP85 from external power supply. (I_{ABL} = 190 ± 10mA)*
4. *Check that HOLD DOWN does not operate when 15.65 $^{+0.05}_{-0}$V DC is applied to TP85 from an external power supply.*
5. *Input a WHIT signal.*
   PICTURE, BRT MAX
   AC power 120V ± 2V AC
6. *Confirm that the HOLD DOWN circuit operates when 15.27 $^{+0}_{-0.05}$V DC is applied to TP85 from an external power supply. (Raster goes out.) (I_{ABL} = 16.50 ± 10μA)*
7. *Confirm that the HOLD DOWN circuit does not operate when 14.47 $^{+0.05}_{-0}$V dc is applied to TP85 from an external power supply.*

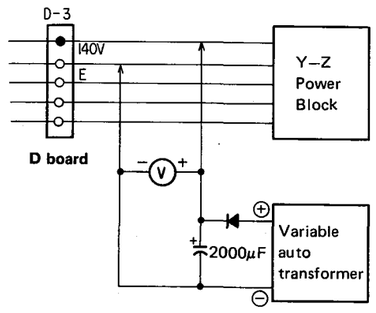




Disengage the ABL terminal of FBT from the foil the un-soldering and connect negative probe to the ABL PIN of FBT.

OVER VOLTAGE PROTECTION CIRCUIT CHECK

1. *Input a monoscope signal.*
   PICTURE, BRT, COLOR } *MAX*
2. *Check that +B voltage is less than 141.5V during AC 133V input.*
3. *Short D board R573.*
4. *Apply 154 ± 3V DC to +B line from an external power supply, and confirm that the OVP circuit operates.*
5. *Apply 141V DC to the +B line and switch the channel. Confirm that the OVP circuit does not operate when power is turned ON and OFF during dot signal.*



+B MAX CHECK AND CHECK AFTER IC651 REPLACEMENT

1. *Input a monoscope signal.*
   PICTURE, BRT Reset
   AC power 130 $^{+2}_{-0}$V AC
2. *Confirm that 140V line voltage is below 143.04V DC.*

CHECK AFTER HVR REPLACEMENT

1. *Tune in an off-air signal.*
   PICTURE, BRT } *RESET*
2. *Confirm the voltage on digital multimeter is less than 14.0 ±1.0V DC at TP85.*

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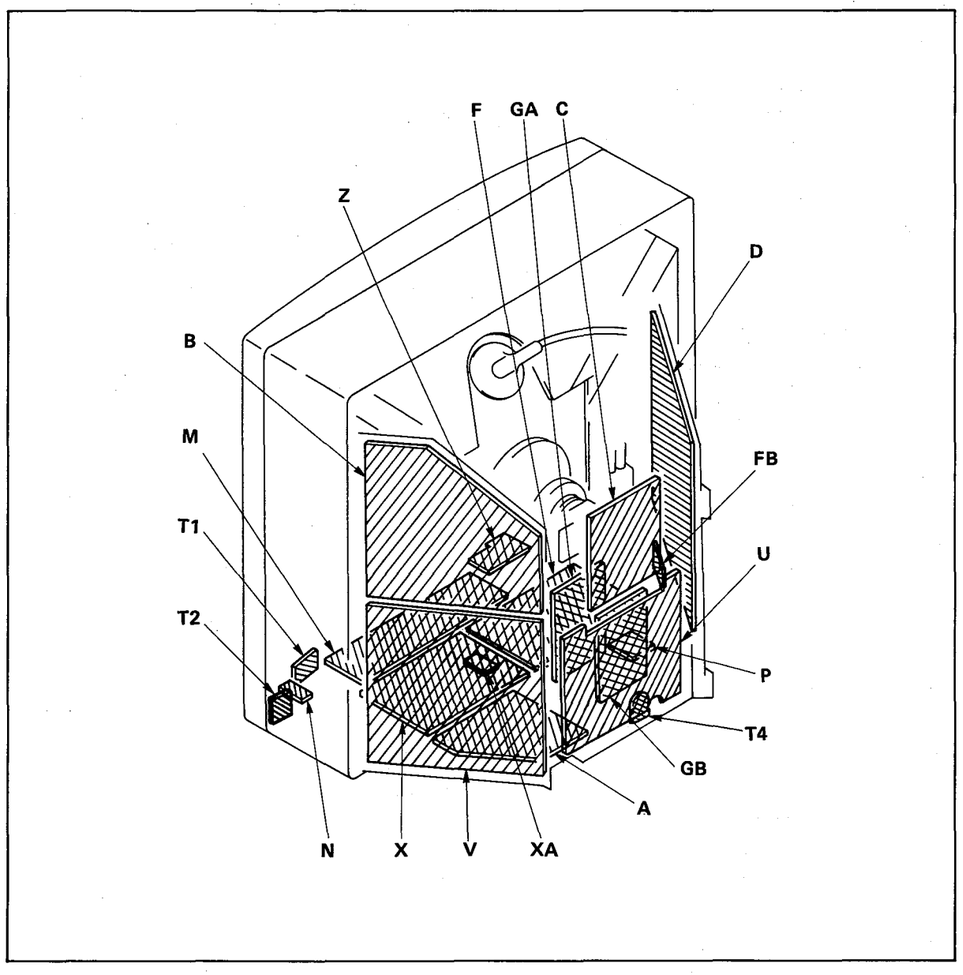
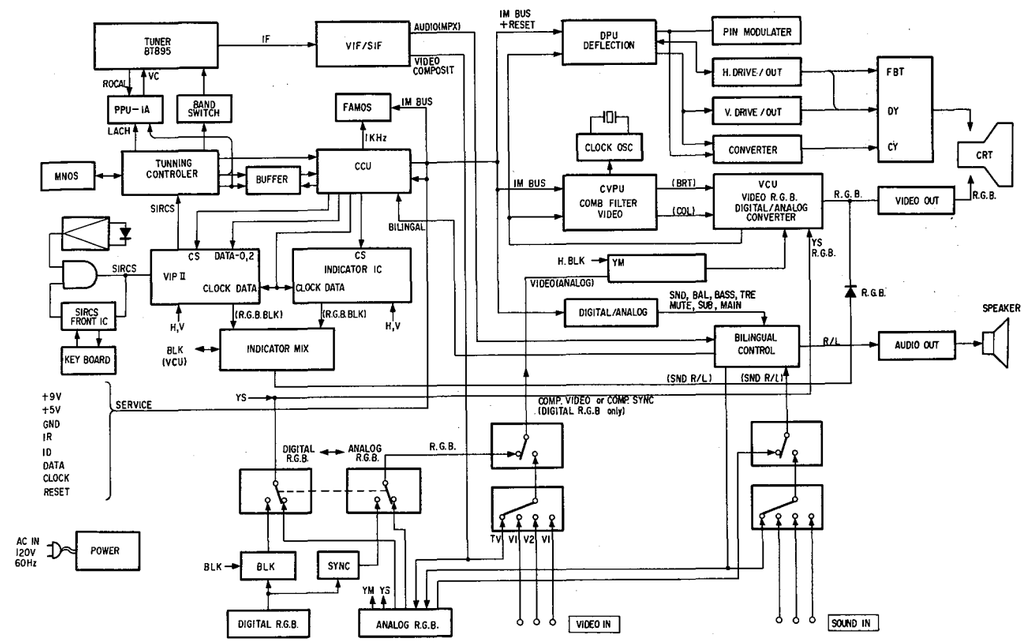
SECTION 4
DIAGRAMS

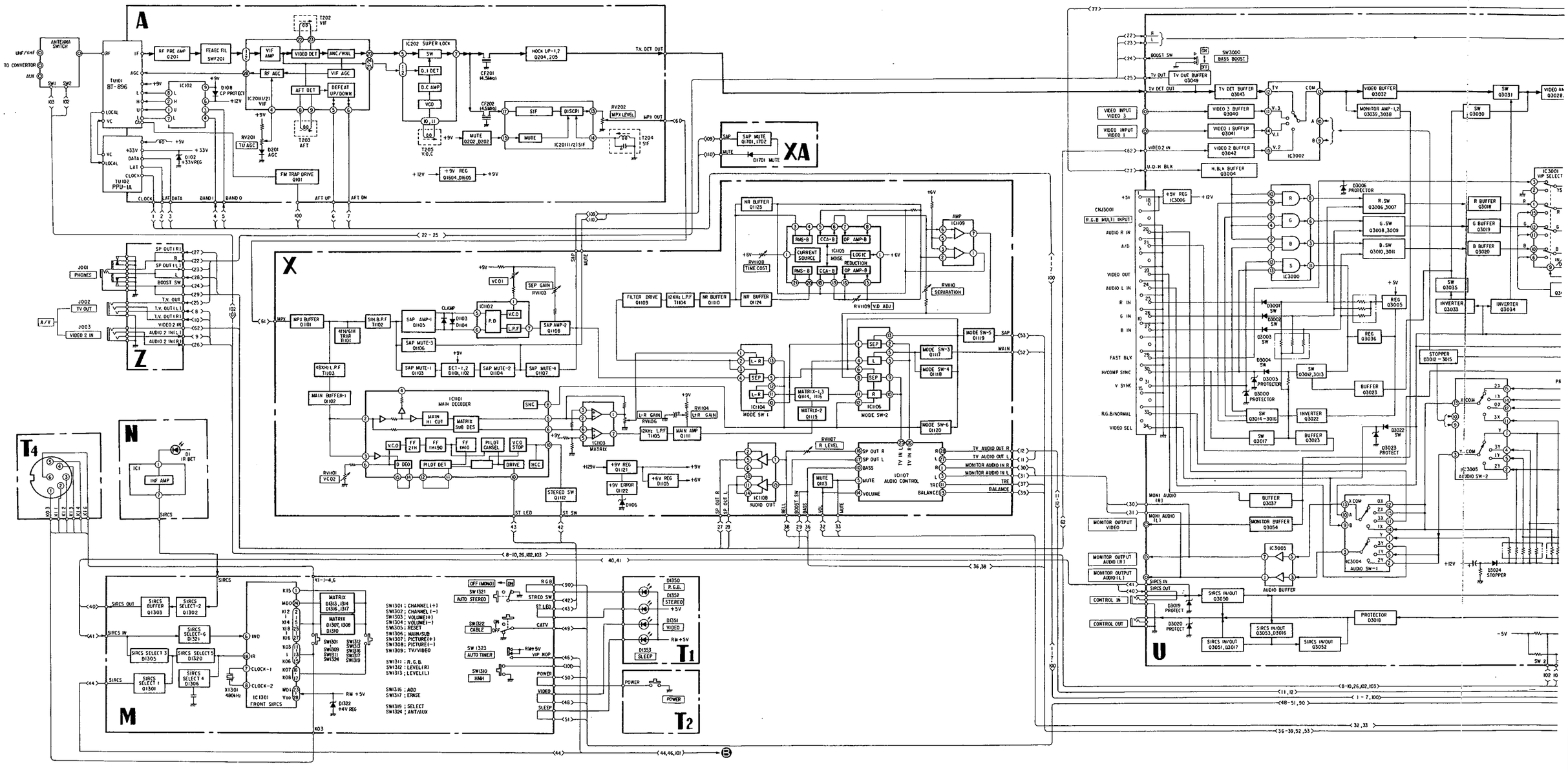
4-1. CIRCUIT BOARDS LOCATION



4-2. OVERALL BLOCK DIAGRAM



4-3. BLOCK DIAGRAM



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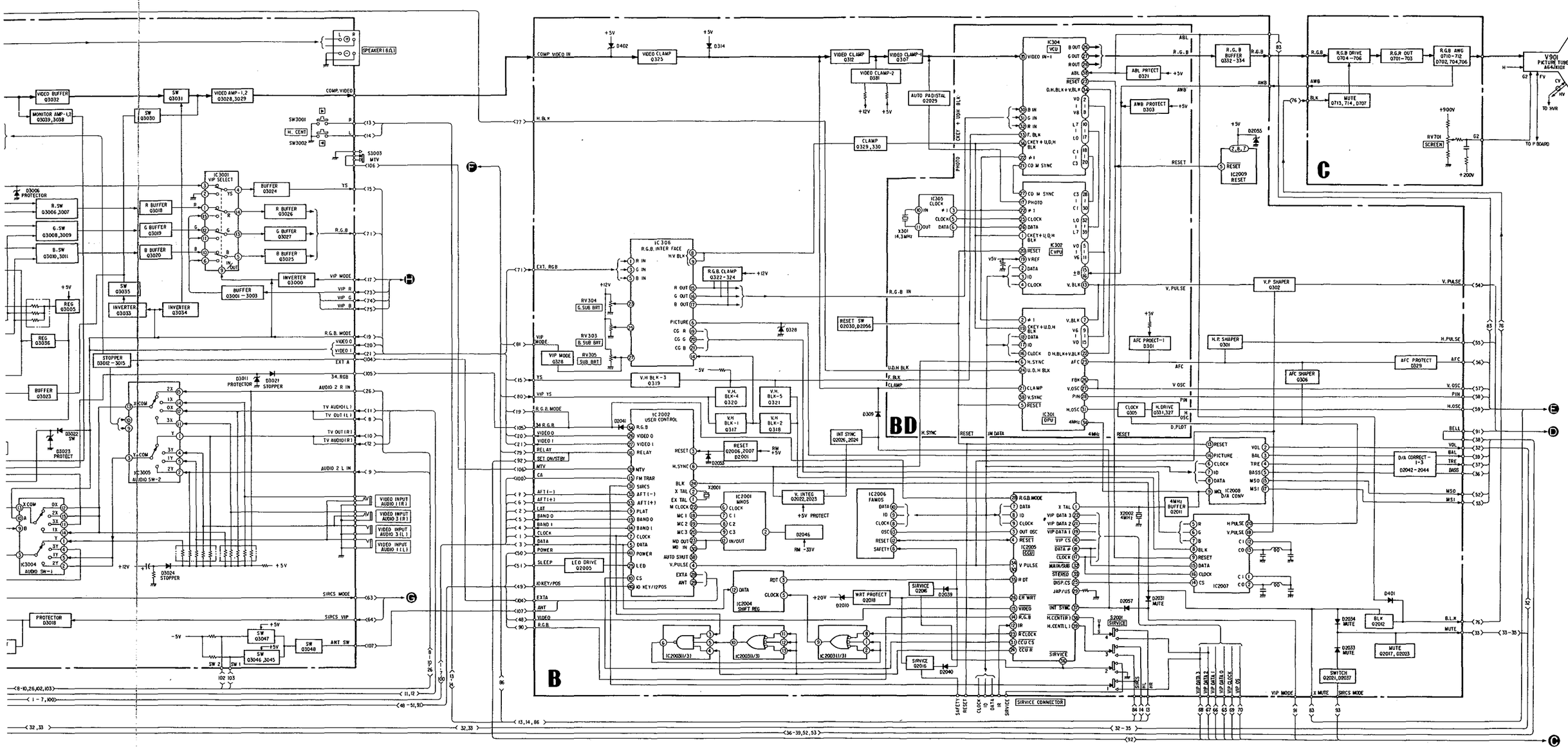

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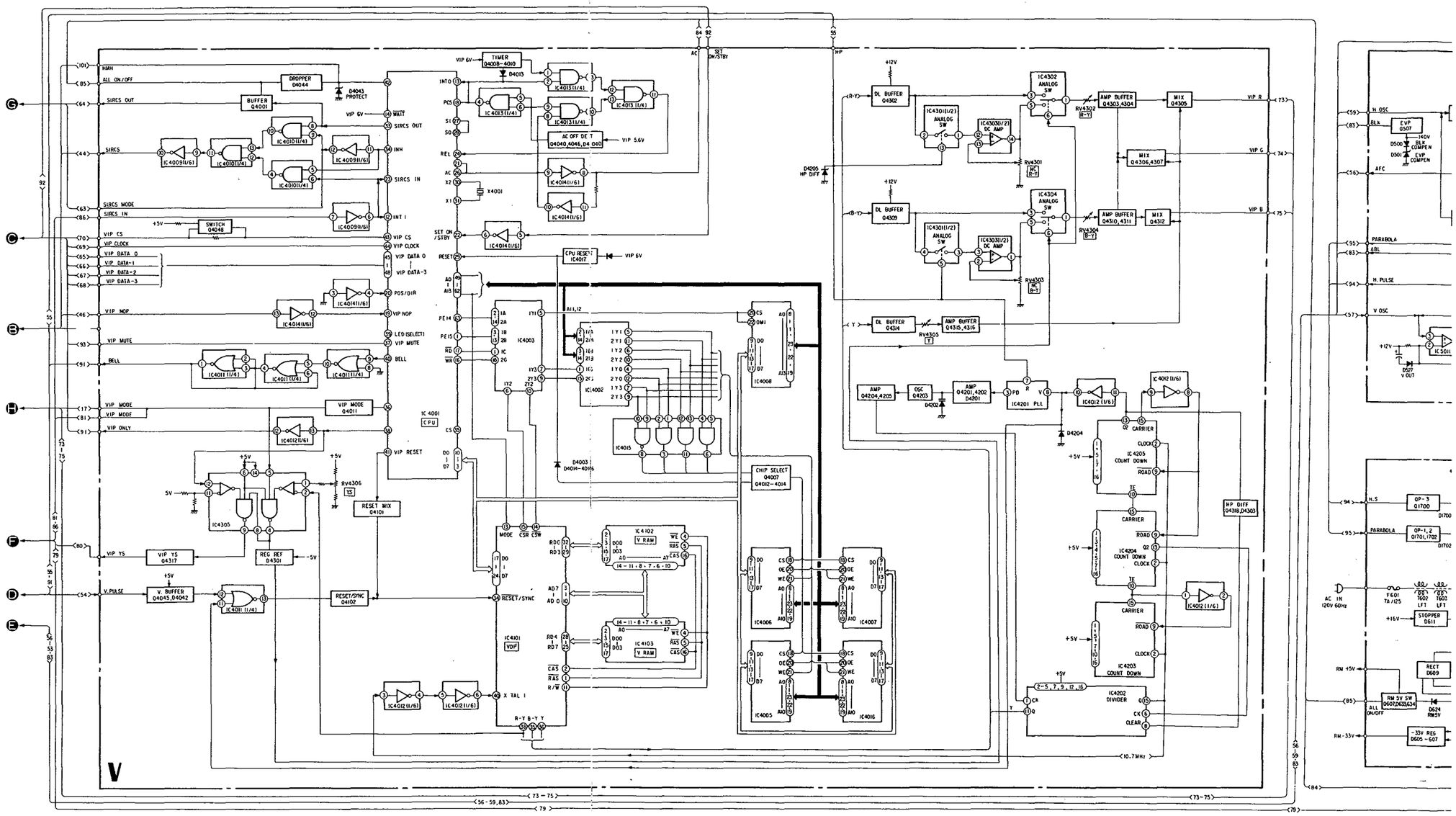

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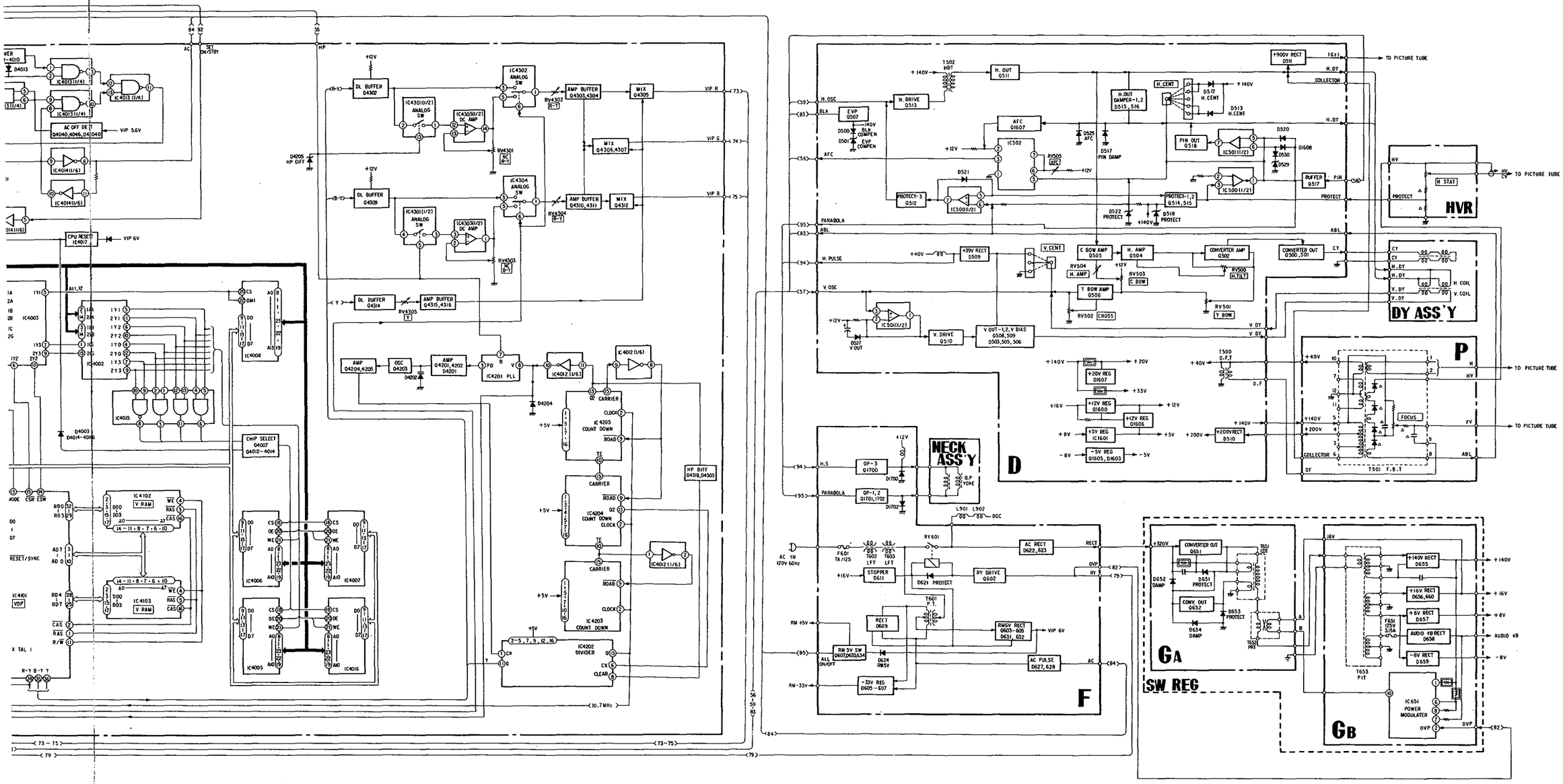
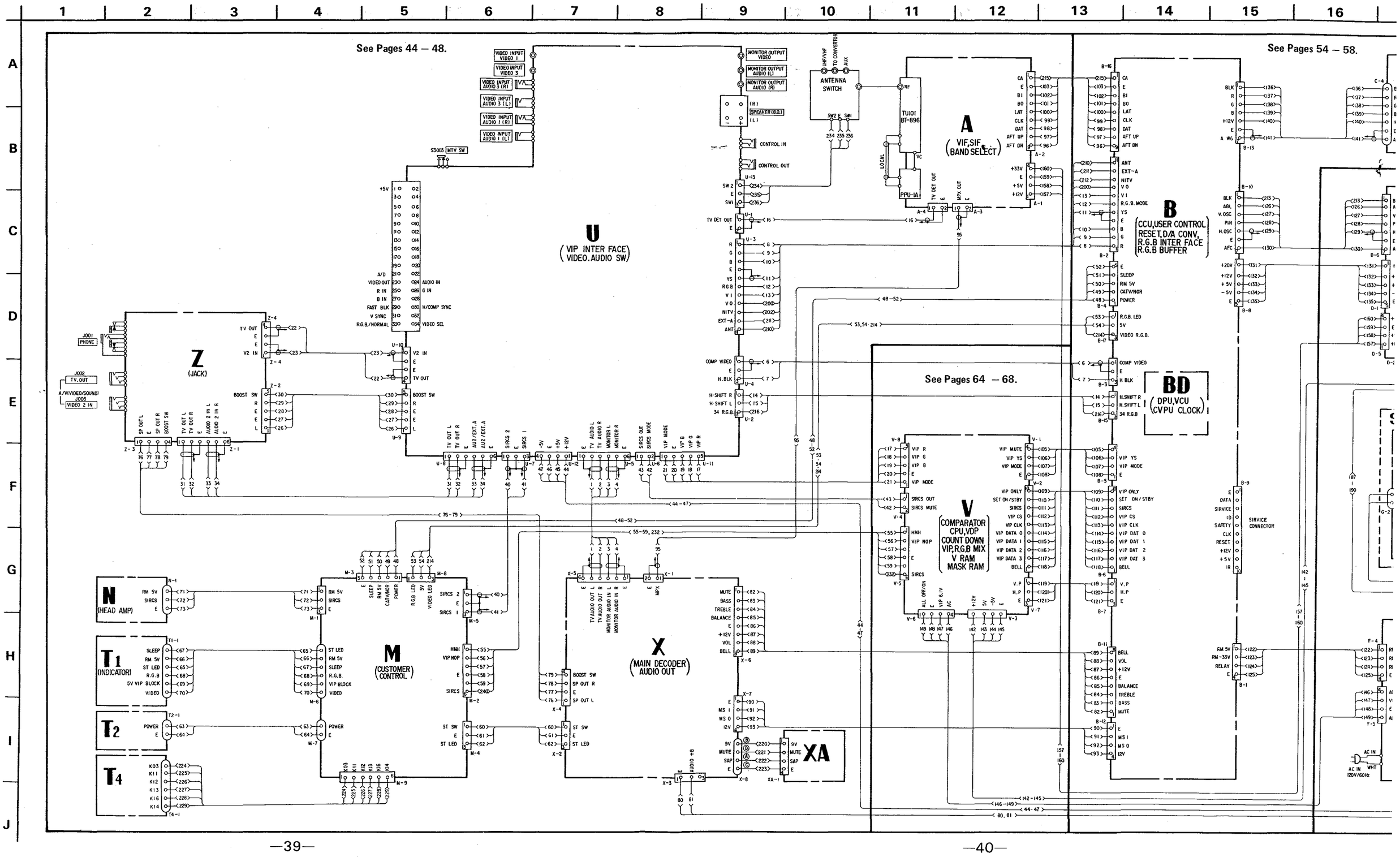
RM-727/APM-X3U



4-4. FLAME SCHEMATIC DIAGRAM



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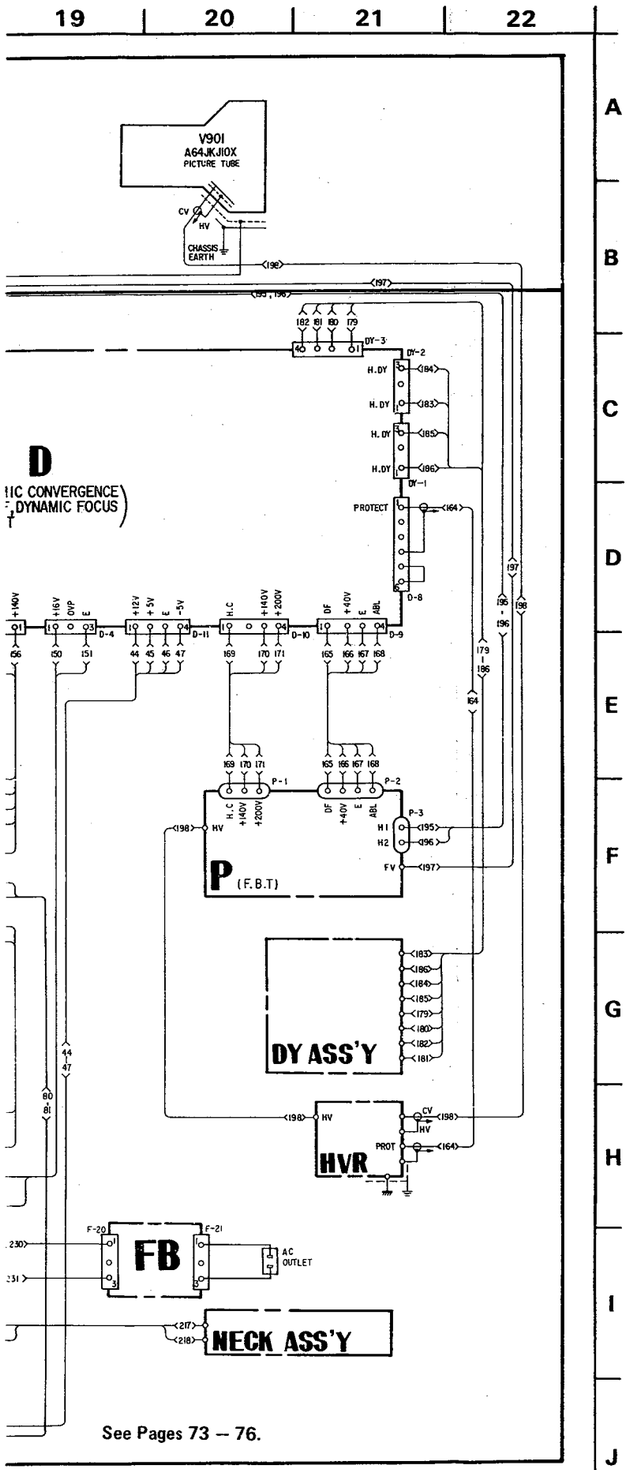
9 10 11 12 13 14 15 16 17 18 19 20 21 22

A B C D E F G H I J

MONITOR OUTPUT VIDEO
MONITOR OUTPUT AUDIO (L)
MONITOR OUTPUT AUDIO (R)
(R)
SPEAKER (8Ω)
(L)
CONTROL IN
CONTROL OUT
U-13
SW2
SW1
U-1
TV DET OUT
U-3
R G B E YS RGB V I V O NITV EXT-A ANT
U-4
COMP VIDEO
H.BLK
H-SHIFT R
H-SHIFT L
34 R.G.B.
U-2
VIP MODE E VIP B VIP G VIP R
U-11
ANTENNA SWITCH
UHF/VHF
TO CONVERTOR
AUX
SW2 SW1
234 235 236
TU101 BT-896
RF
LOCAL
VC
PPU-1A
TV DET OUT
MPX OUT
A-4 A-3
A
(VIF,SIF BAND SELECT)
CA E BI BO LAT CLK DAT AFT UP AFT DN
A-2
+33V E +5V +12V
A-1
B-16
B
(CCU,USER CONTROL RESET,D/A CONV, R.G.B INTER FACE R.G.B BUFFER)
ANT EXT-A NITV V O V I R.G.B. MODE YS E B G R
B-2
E SLEEP RM 5V CATV/NOR POWER
B-4
R.G.B. LED 5V VIDEO R.G.B.
B-17
COMP VIDEO E H.BLK
B-3
H.SHIFT R H.SHIFT L 34 R.G.B.
B-15
See Pages 64 — 68.
48 – 52
53, 54 - 214
BD
(DPU,VCU (CVPU CLOCK)
See Pages 54 — 58.
BLK R G B +12V E A WG
B-13
C
(RGB OUT)
C-4
C-2 E CHASSIS EARTH
C-1 E FV H2 H1
C-5
C-3
V901 A64JKJ10X PICTURE TUBE
CV HV CHASSIS EARTH
G2 +300V E
BLK ABL V.OSC PIN H.OSC E AFC
B-10
D-6
+300V(G2) +200V E
D-7
D
(DYNAMIC CONVERGENCE H.V DEF, DYNAMIC FOCUS H.V OUT)
+20V +12V +5V -5V E
B-8
D-1
+33V E +5V +12V
D-5
+12V +5V -5V E
D-2
E +12V PARABOLA H.S
D-12
-8V +16V +8V E +140V
D-3
+16V OVP E
D-4
+12V +5V E 5V
D-11
H.C +140V +200V
D-10
DF +40V E ABL
D-9
182 181 180 178
DY-3
DY-2 H.DY H.DY H.DY H.DY
DY-1
PROTECT
D-8
DY ASS'Y
P (F.B.T)
P-1 H.C +140V +200V
P-2 DF +40V E ABL
P-3 H1 H2 FV
HV
CV HV PROT
HVR
SW REG
GA GB
A B
RECT GND
G-2
G-5 G-4
+140V E +8V +16V -9V
G-1 G-3
AUDIO +B E
G-6
OVP E
CHASSIS EARTH
F-12 E +12V PARABOLA H.S
F-2 RECT GND
F-10 OVP E
F-3 +16V E
F-4 RM 5V RM -33V RELAY E
F-5 AC VIP 6.1V E ALL OFF/ON
F
(POWER SUPPLY)
AC IN
AC IN WHT 120V/60Hz
F-1 D.G.C
L901 L902
F-11 CHASSIS EARTH
QP-1 QP-2
F-13
230 231
F-20 F-21
FB
AC OUTLET
NECK ASS'Y
SERVICE CONNECTOR
E DATA SIRVICE IO SAFETY CLK RESET +12V +5V IR
B-9
RM 5V RM -33V RELAY E
B-1
V
(COMPARATOR CPU,VDP COUNT DOWN VIP,R.G.B MIX V RAM MASK RAM)
V-8 VIP R VIP G VIP B E VIP MODE
V-4
SIRCS OUT SIRCS MUTE
V-5
HMH VIP NOP E SIRCS
V-6
ALL OFF/ON E VIP 6.1V AC
V-1 VIP MUTE VIP YS VIP MODE E
V-2 VIP ONLY SET ON/STBY SIRCS VIP CS VIP CLK VIP DATA 0 VIP DATA 1 VIP DATA 2 VIP DATA 3 BELL
V-7
V.P H.P E
V-3
+12V 5V -5V E
B-5 VIP YS VIP MODE E
B-6 VIP ONLY SET ON/STBY SIRCS VIP CS VIP CLK VIP DAT 0 VIP DAT 1 VIP DAT 2 VIP DAT 3 BELL
B-7 V.P H.P E
B-11 BELL VOL +12V E BALANCE TREBLE BASS MUTE
B-12 E MS 1 MS 0 12V
X-1 MUTE BASS TREBLE BALANCE E +12V VOL BELL
X-6
X-7 E MS 1 MS 0 12V
X-8
9V MUTE SAP E
XA
XA-1 9V MUTE SAP E
AUDIO +B
CODER) OUT
142 – 145
146 – 149
44 - 47
80, 81
157 I 160
187 I 190
See Pages 73 — 76.

KV-25DXR
RM-727/APM-X3U
KV-25DXR
RM-727/APM-X3U



See Pages 73 – 76.

KV-25DXR
RM-727/APM-X3U

KV-25DXR
RM-727/APM-X3U

4-5. SCHEMATIC DIAGRAMS AND PRINTED WIRING BOARDS

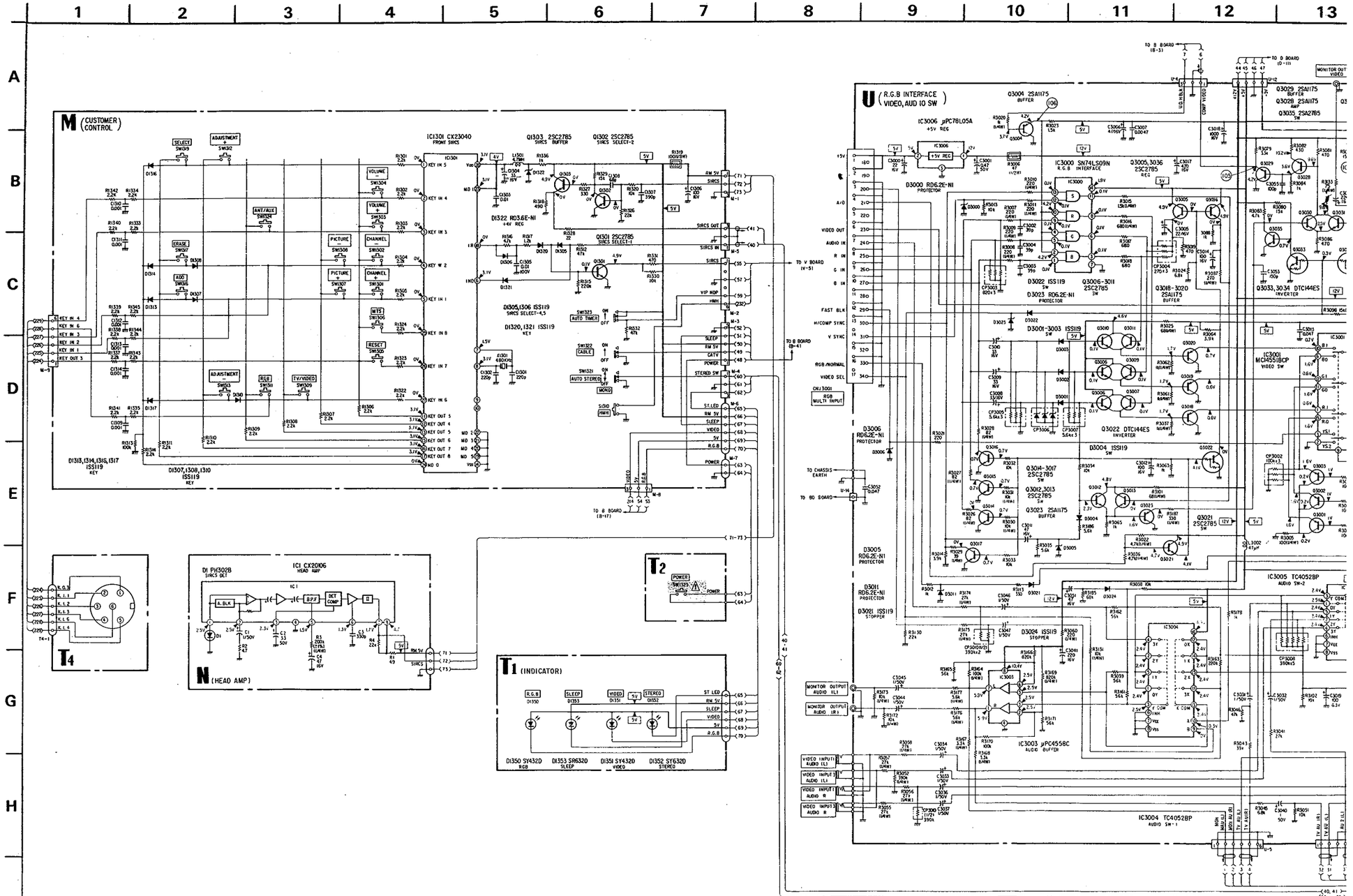
Note: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

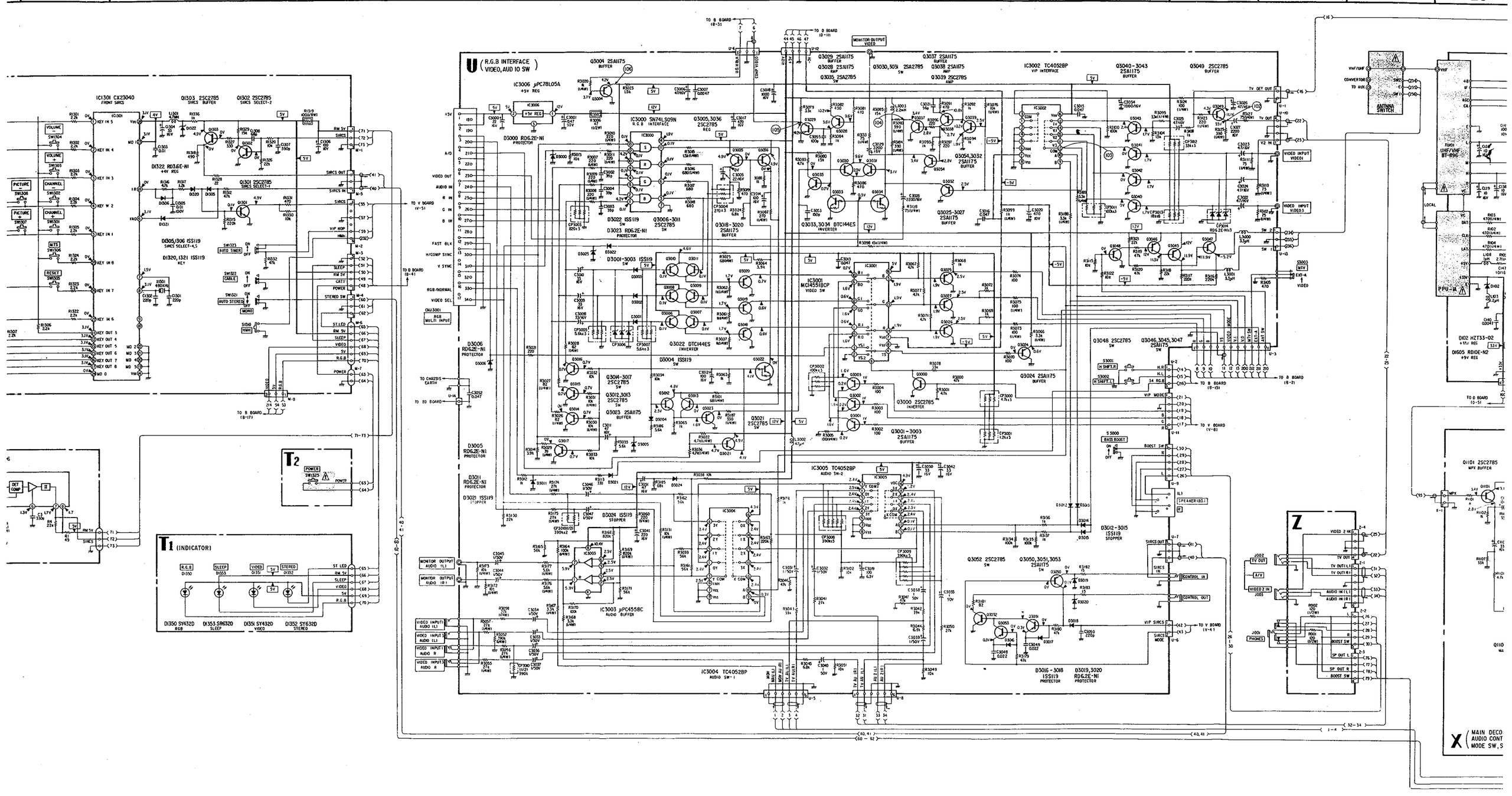
Note:

- All capacitors are in μF unless otherwise noted. pF : μμF 50WV or less are not indicated except for electrolytics
- All resistors are in ohms, 1/6 W unless otherwise noted. kΩ : 1000Ω, MΩ : 1000kΩ
- ⚠ : nonflammable resistor.
- △ : internal component.
- [ ] : panel designation.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- The components identified by ⊠ in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.
- When replacing components identified by ◪ , make the necessary adjustments indicated. If results do not meet the specified value, change the component identified by ⊠ and repeat the adjustment until the specified value is achieved.
  (Refer to HV HOLD DOWN and BLANKING Adjustments on page 27 – 28).
- When replacing the part in below table, be sure to perform the related adjustment.

Part replaced (◪)		Adjustment
IC500, Q512, Q514, Q515, D518, D522, R533, R560, R570 R571, R572, R573, R574, R582, R583, R1500, R1502, R1503, R1504, R1522, R1530	on D board	HV HOLD DOWN ADJUSTMENT (R573)
Q713, Q714, D707, R728, R759, R760, R761, R762, R763, R770, R774, R775,	on C board	BLANKING ADJUSTMENT (R534)
Q507, D500, D501, R532, R534, R536, R584	on D board	
Q2012, R2141, R2143, R2144	on B board	

- Voltages are dc with respect to ground unless otherwise noted.
- Readings are taken with a 10MΩ digital multimeter.
- [ ] : adjustment for repair.
- Readigns are taken with color-bar signal input.
- Voltage variations may be noted due to normal production tolerances.
- ▭V : B+ bus.
- ▭V : B- bus.
- Circled numbers are waveform references.


M (CUSTOMER) (CONTROL)
U (R.G.B INTERFACE VIDEO, AUD IO SW)
N (HEAD AMP)
T1 (INDICATOR)
T2
T4
IC1301 CX23040 FRONT SIRCS
IC3000 SN74LS09N R.G.B INTERFACE
IC3006 μPC78L05A +5V REG
IC3003 μPC4558C AUDIO BUFFER
IC3004 TC4052BP AUDIO SW-1
IC3005 TC4052BP AUDIO SW-2
IC CX20106 HEAD AMP
Q3000 2SA1175 BUFFER
Q3001-3003 ISS119 SW
Q3004 ISS119 SW
Q3005,3036 2SC2785 REG
Q3006-3011 2SC2785 SW
Q3012,3013 2SC2785 SW
Q3014-3017 2SC2785 SW
Q3018-3020 2SA1175 BUFFER
Q3021 2SC2785 SW
Q3021 ISS119 STOPPER
Q3022 DTC144ES INVERTER
Q3023 2SA1175 BUFFER
Q3024 ISS119 STOPPER
Q3029 2SA1175 BUFFER
Q3033, 3034 DTC144ES INVERTER
Q3035 2SA2785 SW
Q1303 2SC2785 SIRCS BUFFER
Q1302 2SC2785 SIRCS SELECT-2
Q1301 2SC2785 SIRCS SELECT-1
D3000 RD6.2E-N1 PROTECTOR
D3001 RD6.2E-N1 PROTECTOR
D3005 RD6.2E-N1 PROTECTOR
D3006 RD6.2E-N1 PROTECTOR
D3011 RD6.2E-N1 PROTECTOR
D3023 RD6.2E-N1 PROTECTOR
D1322 RD3.6E-N1 +6V REG
D3305,3306 ISS119 SIRCS SELECT-4,5
D1320, 1321 ISS119 KEY
D1313, 1314, 1316, 1317 ISS119 KEY
D1307, 1308, 1310 ISS119 KEY
D1350 SY432D RGB
D1353 SR6320 SLEEP
D1351 SY4320 VIDEO
D1352 SY632D STEREO
D1 PH302B SIRCS DET
CN13001 RGB MULTI INPUT
CP3003 390Ω×5
CP3004 270Ω×3
CP3005 5.6kΩ×3
CP3006 5.6kΩ×3
CP3007 5.6kΩ×3
CP3008 390Ω×5
CP3009 82Ω×4
CP3010 100Ω×3
CP3011 100Ω×3
CP3012 100Ω×3
CP3013 100Ω×3
CP3014 100Ω×3
CP3015 100Ω×3
CP3016 100Ω×3
CP3017 100Ω×3
CP3018 100Ω×3
CP3019 100Ω×3
CP3020 100Ω×3
CP3021 100Ω×3
CP3022 100Ω×3
CP3023 100Ω×3
CP3024 100Ω×3
CP3025 100Ω×3
CP3026 100Ω×3
CP3027 100Ω×3
CP3028 100Ω×3
CP3029 100Ω×3


4
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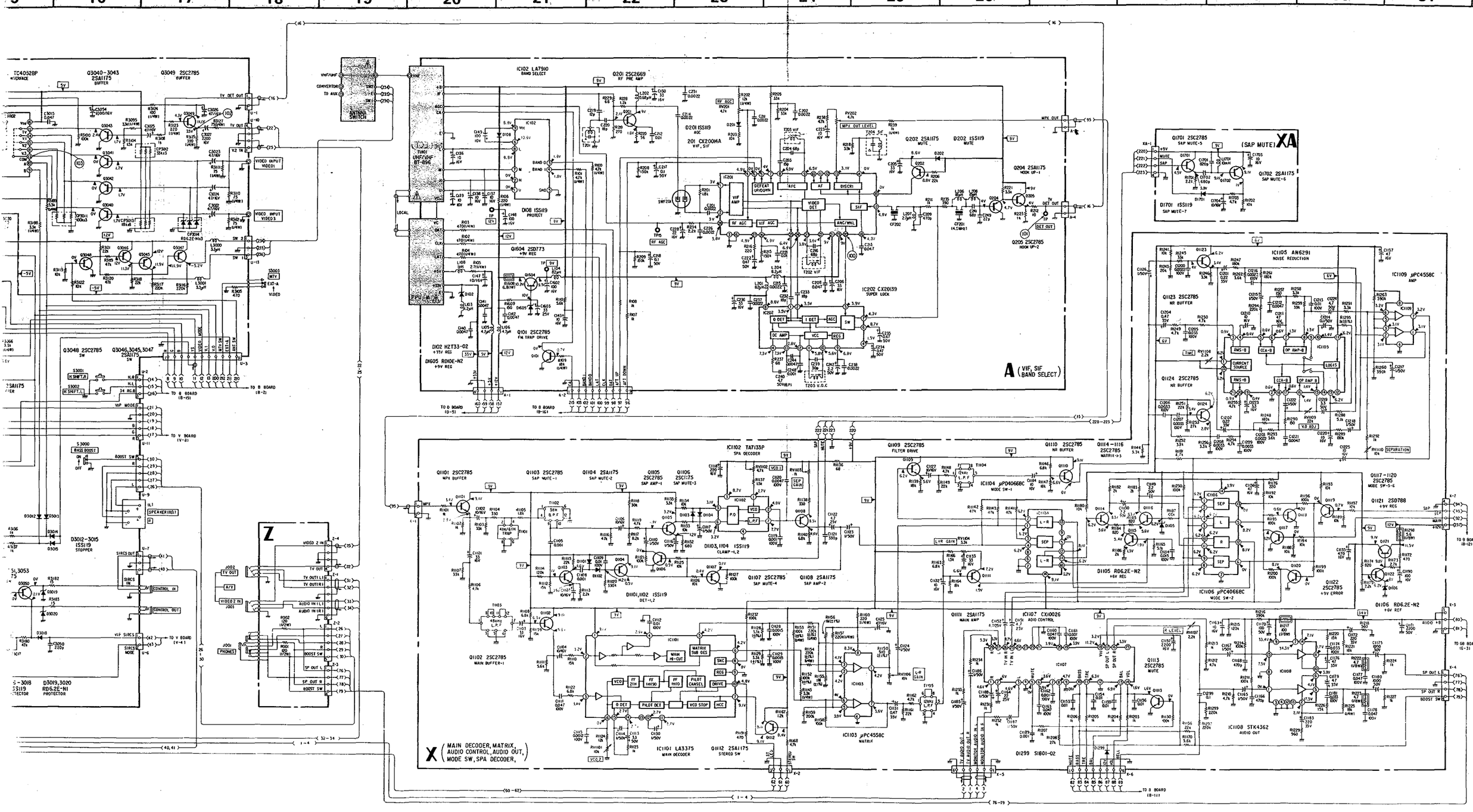
U R.G.B INTERFACE VIDEO, AUD IO SW
IC1301 CX23040 FRONT SIRCS
Q1303 2SC2785 SIRCS BUFFER
Q1302 2SC2785 SIRCS SELECT-2
Q1301 2SC2785 SIRCS SELECT-1
D1322 RD3.6E-N1 +4V REG
D1320, 1321 ISS119 KEY
D1305, 1306 ISS119 SIRCS SELECT-4,5
IC3006 µPC78L05A +5V REG
IC3000 SN74LS09N R.G.B INTERFACE
Q3004 2SA1175 BUFFER
Q3029 2SA1175 BUFFER
Q3028 2SA1175 AMP
Q3035 2SA2785 SW
Q3030, 3031 2SA2785 SW
Q3037 2SA1175 BUFFER
Q3038 2SA1175 AMP
Q3039 2SC2785 AMP
IC3002 TC4052BP VIP INTERFACE
Q3040 - 3043 2SA1175 BUFFER
Q3049 2SC2785 BUFFER
Q3054, 3032 2SA1175 BUFFER
Q3025 - 3027 2SA1175 BUFFER
Q3033, 3034 DTC144ES INVERTER
Q3018 - 3020 2SA1175 BUFFER
D3000 RD6.2E-N1 PROTECTOR
D3001 - 3003 ISS119 SW
D3022 ISS119 SW
D3023 RD6.2E-N1 PROTECTOR
Q3022 DTC144ES INVERTER
D3004 ISS119 SW
D3006 RD6.2E-N1 PROTECTOR
Q3014 - 3017 2SC2785 SW
Q3012, 3013 2SC2785 SW
Q3023 2SA1175 BUFFER
Q3021 2SC2785 SW
D3005 RD6.2E-N1 PROTECTOR
D3011 RD6.2E-N1 PROTECTOR
D3021 ISS119 STOPPER
D3024 ISS119 STOPPER
IC3004 TC4052BP AUDIO SW-2
IC3005 TC4052BP AUDIO SW-1
IC3003 µPC4558C AUDIO BUFFER
IC3001 MC14551BCP VIDEO SW
Q3000 2SC2785 INVERTER
Q3001 - 3003 2SA1175 BUFFER
Q3024 2SA1175 BUFFER
Q3048 2SC2785 SW
Q3046, 3045, 3047 2SA1175 SW
D3012 - 3015 ISS119 STOPPER
Q3052 2SC2785 SW
Q3050, 3051, 3053 2SA1175 SW
D3016 - 3018 ISS119 PROTECTOR
D3019, 3020 RD6.2E-N1 PROTECTOR
Q3101 2SC2785 MPX BUFFER
D102 HZ33-02 +15V REG
D1605 RD10E-N2 +9V REG
T1 (INDICATOR)
T2
Z
X (MAIN DECO AUDIO CONT MODE SW, S
TO B BOARD (B-31)
TO D BOARD (D-11)
TO V BOARD (V-51)
TO B BOARD (B-41)
TO B BOARD (B-171)
TO CHASSIS EARTH
TO IO BOARD
TO B BOARD (B-15)
TO B BOARD (B-21)
TO V BOARD (V-81)
TO V BOARD (V-41)
TO D BOARD (D-51)
MONITOR OUTPUT VIDEO
VIDEO INPUT VIDEO1
VIDEO INPUT VIDEO3
VIP MODE
SPEAKER (8Ω)
VHF/UHF CONVERTOR
TO AUX
ANTENNA SWITCH
UHF/VHF BT-856
PPU-1A
LOCAL
BASS BOOST
BOOST SW
H SHIFT R
H SHIFT L
SIRCS OUT
SIRCS IN
SIRCS MODE
CONTROL IN
CONTROL OUT
TV OUT
VIDEO 2 IN
PHONES
SP OUT L
SP OUT R
RGB MULTI INPUT
VIDEO INPUT1 AUDIO L
VIDEO INPUT1 AUDIO R
VIDEO INPUT2 AUDIO L
VIDEO INPUT2 AUDIO R
MONITOR OUTPUT AUDIO L
MONITOR OUTPUT AUDIO R

KV-25DXR
RM-727/APM-X3U



KV-25DXR
RM-727/APM-X3U

[VIP INTERFACE
VIDEO, AUDIO SW] **U** **U**

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17

A B C D E F G H I

(100)

2Vp-p(H)

(101) (102) (103) (104) (105)

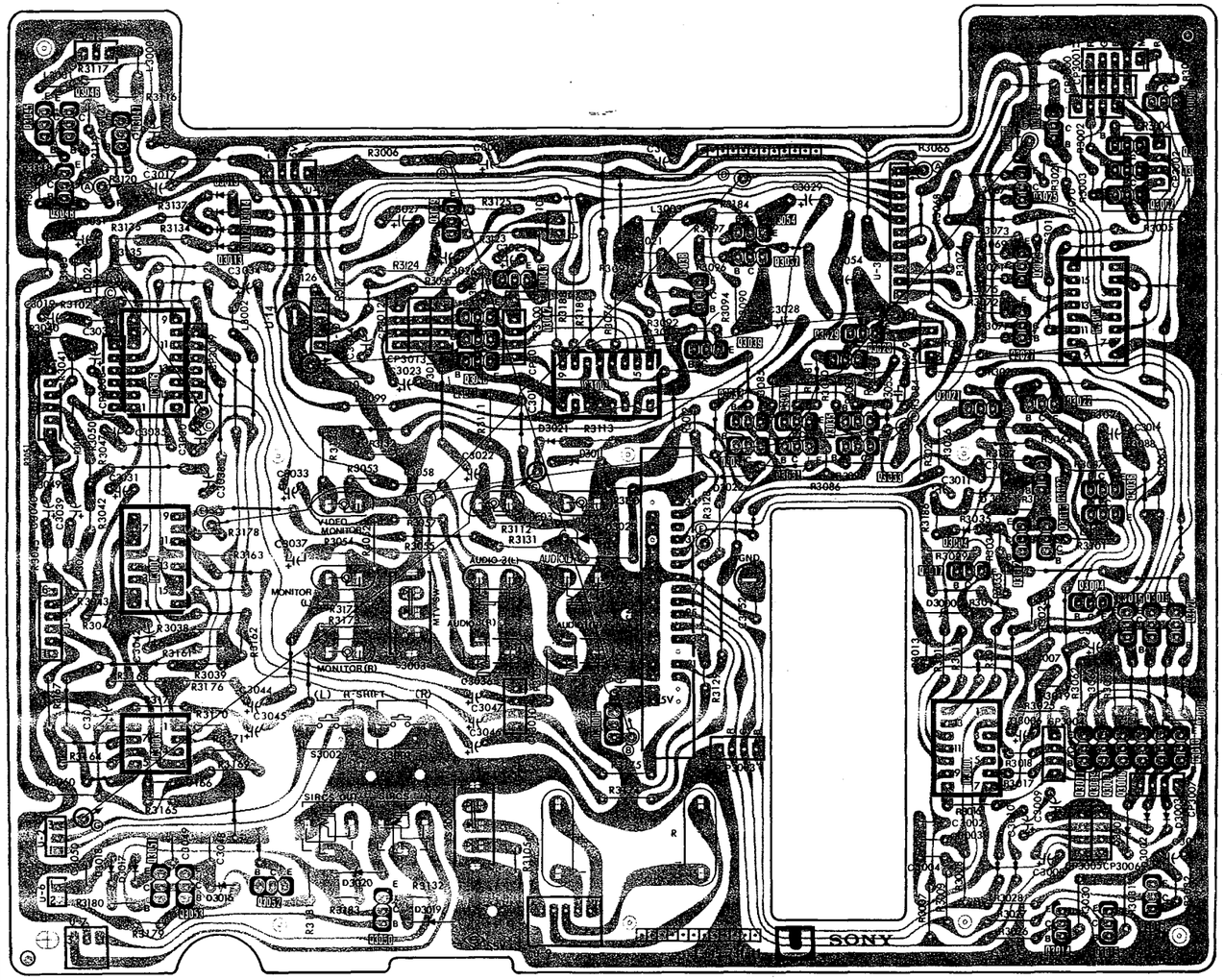
(101) 1.9Vp-p(H)
(102) 1.9Vp-p(H)
(103) 1Vp-p(H)
(104) 2Vp-p(H)
(105) 1.9Vp-p(H)

(106)

4.2Vp-p(H)

— U Board —

Q, IC	D
3000	
3024	
3045,3046	3006
3047	
3003	
3001	
3048	
3025, 3002	3015
	3014
3049	3012
3054	3013
3037	
3026	
3043	3024
3038	
IC3001	
3042	
3027	
3041	
3029	
3039	
IC3005 3028	
3040	
IC3002	
3022	
3021	
3032,3030,3035	3021
3034,3031,3033	
	3011
3023	
3036	3005
3005	
	3004
3012,3013	3023
IC3004	
3017	
3004	3000
3018,3019,3020	
IC3006	
IC3003 IC3000	
3011,3009,3007	
3006,3008,3010	
	3002,3005
	3001
	3108,3107
3051,3053,3052	3016 3020
3016	
3050	
3014,3015	3019
Q, IC	D


R3117
C3016
R3116
R3006
C3017
R3125
R3184
C3029
R3135
R3134
R3124
C3028
R3092
R3113
C3022
C3033
R3053
R3086
R3178
R3363
C3037
R3054
R3131
AUDIO-2(L)
AUDIO-2(R)
GND
R3038
R3039
R3176
C3044
C3045
C3047
C3046
R3170
R3165
R3164
R3180
R3179
D3020
R3132
R3183
D3019
R3181
R3182
D3015
R3102
R3101
R3103
R3104
R3105
R3106
R3107
R3108
R3109
R3110
R3111
R3112
R3114
R3115
R3118
R3119
R3120
R3121
R3122
R3123
R3126
R3127
R3128
R3129
R3130
R3133
R3136
R3137
R3138
R3139
R3140
R3141
R3142
R3143
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R3169
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R3172
R3173
R3174
R3175
R3177
C3001
C3002
C3003
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C3007
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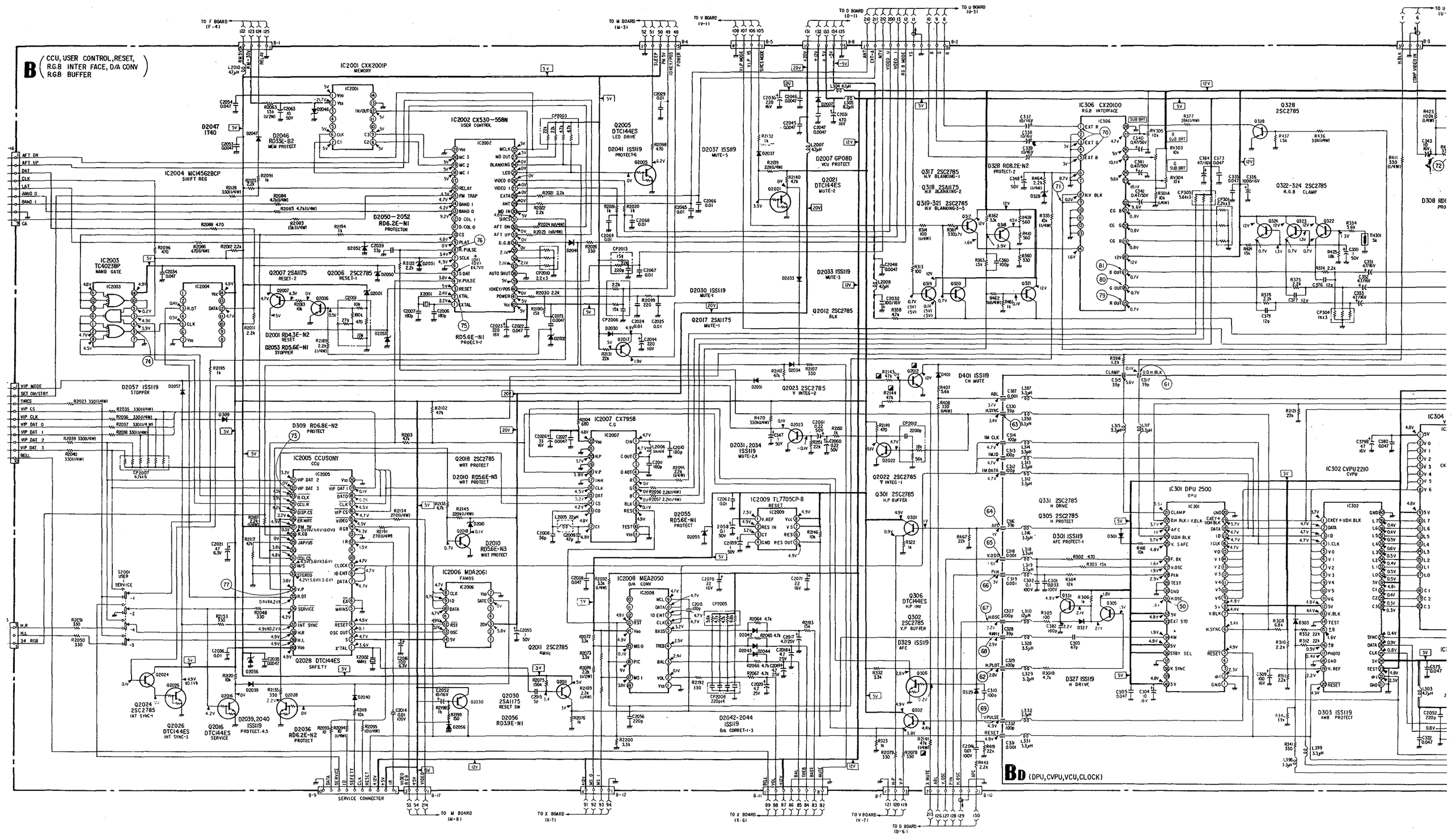
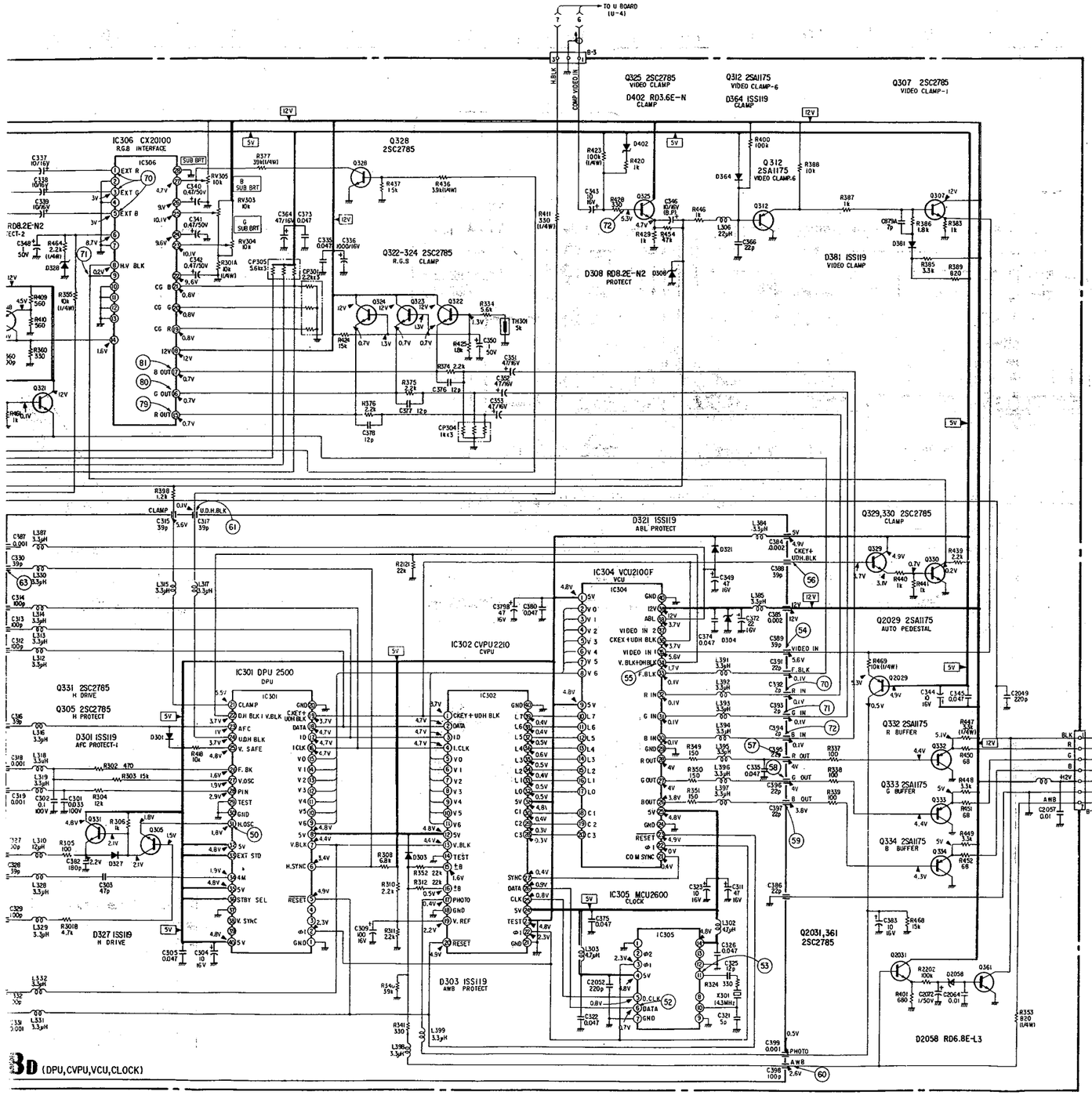
C3127
C3128
C3129
C3130
C3131
C3132

B (CCU, USER CONTROL, RESET, R.G.B INTER FACE, D/A CONV R.G.B BUFFER)




IC306 CX20100 RGB INTERFACE
Q328 2SC2785
0322-324 2SC2785 R.G.B CLAMP
D308 RD8.2E-N2 PROTECT
Q325 2SC2785 VIDEO CLAMP
D402 RD3.6E-N CLAMP
Q312 2SA1175 VIDEO CLAMP-6
D364 1SS119 CLAMP
Q307 2SC2785 VIDEO CLAMP-1
D381 1SS119 VIDEO CLAMP
D321 1SS119 ABL PROTECT
Q329,330 2SC2785 CLAMP
IC304 VCU2100F VCU
Q2029 2SA1175 AUTO PEDESTAL
IC302 CVPU2210 CVPU
IC301 DPU 2500 DPU
Q331 2SC2785 H DRIVE
Q305 2SC2785 H PROTECT
D301 1SS119 AFC PROTECT-1
D327 1SS119 H DRIVE
IC305 MCU2600 CLOCK
D303 1SS119 AWB PROTECT
Q332 2SA1175 R BUFFER
Q333 2SA1175 G BUFFER
Q334 2SA1175 B BUFFER
Q2031,361 2SC2785
D2058 RD6.8E-L3
3D (DPU,CVPU,VCU,CLOCK)
TO U BOARD (U-4)
TO D BOARD (D-7)
TO P BOARD (P-3)
TO P BOARD
C-1
C-2
C-5
B-3
B-13
C901 CRT
Q701—703 2SC2611 B.G.R OUT-1
Q710—711 2SA1091 B.G.R OUT-3
Q704—706 2SC2785 B.G.R OUT-2
Q713,714 2SA1175 MUTE-1,2
D701—706 1SS119 PROTECT-1
D707 1SS119 MUTE
C (R.G.B OUT)

B [CCU USER CONTROL
RESET D/A CONV, R. G. B BUFFER
R. G. B INTER FACE]

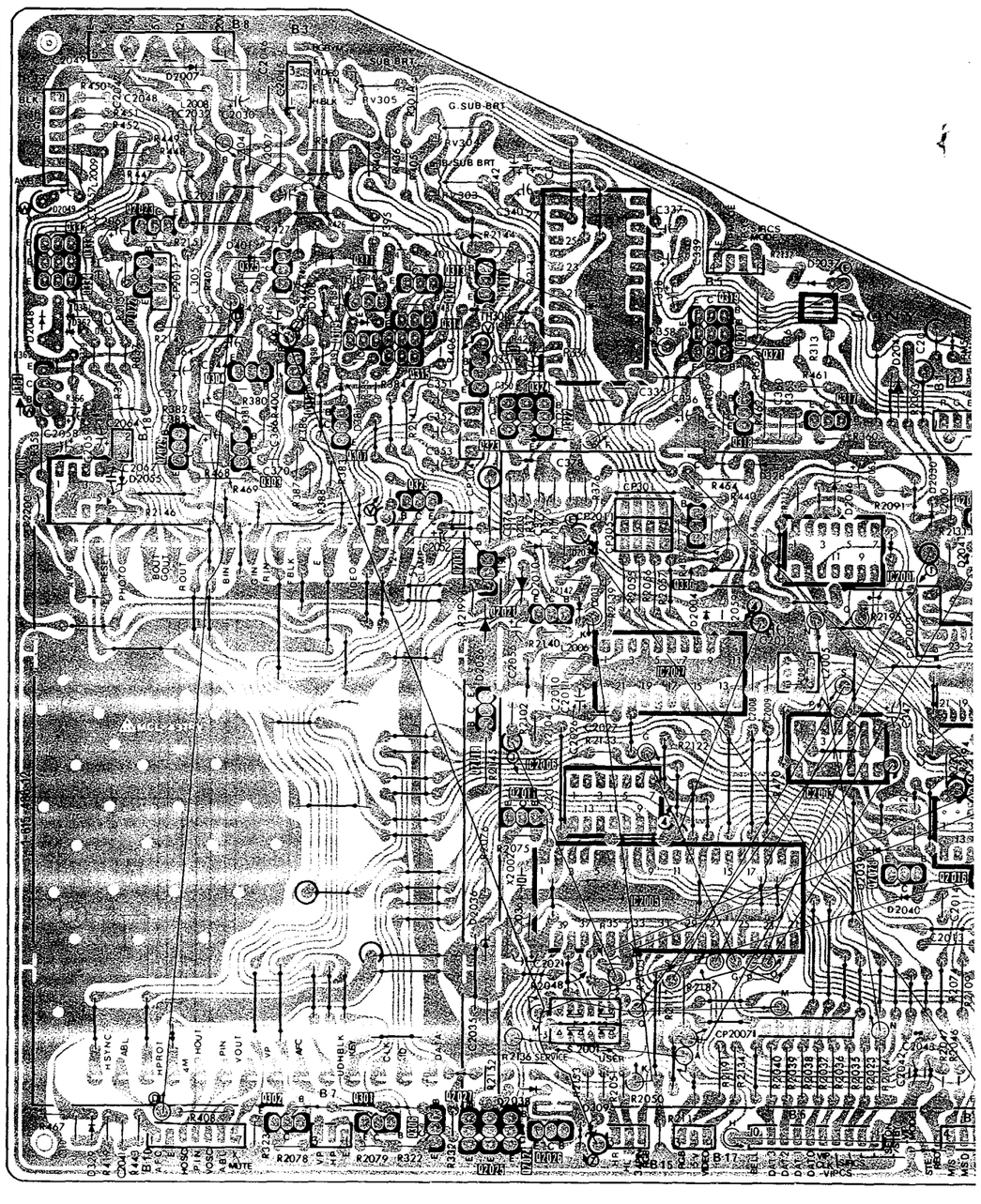
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17

A B C D E F G H I

(51) 4.8Vp-p(H)	(60) 8Vp-p(H)	(70) 0.36Vp-p(H)	(80) 0.5Vp-p(H)
(52) 0.7Vp-p(H)	(61)(62) 4.4Vp-p(H)	(71) 4.2Vp-p(H)	(81) 0.18Vp-p(H)
(53) 0.14Vp-p(7.142MHz)	(63) 3.5Vp-p(H)	(72) 1.9Vp-p(H)	(82) 4.4Vp-p(H)
(54) 1.8Vp-p(H)	(64) 11Vp-p(H)	(73) 4.8Vp-p(V)	(83) 4.7Vp-p(H)
(55) 2.1Vp-p(H)	(65) 2.7Vp-p(V)	(74) 5Vp-p(H)	(84) 5.2Vp-p(H)
(56) 4Vp-p(H)	(66) 1.1Vp-p(V)	(75) 4.8Vp-p(1.884MHz)	(85) 128Vp-p(H)
(57) 5.2Vp-p(H)	(67) 2.5Vp-p(H)	(76) 3.5Vp-p(H)	(86) 143Vp-p(H)
(58) 4.7Vp-p(H)	(68) 3.6Vp-p(4MHz)	(77) 4Vp-p(V)	(87) 145Vp-p(H)
(59) 5Vp-p(H)	(69) 4.6Vp-p(V)		(88) 22Vp-p(H)

— B Board —

Q, IC	D	ADJ
	2007	RV305
		RV304
		RV303
2023		
332	401	
333 325 2022, IC306	2037	
334 2012		
328	308	
319		
320		
321		
304,312	381	
323,324,318 322,317		
307		
2029	328	
2005	2046	
	2055 2030	
IC2009		
329 2017		
330 IC2001	2033 2041	
	2034	
	2010 2002	
2030	2031	
2021		
	2056	
IC2007 IC2002		
2018	2053	
IC2003		
2007		
2006	2001	
IC2006		
2011 IC2004	2039	
2028,2016	2040	
IC2005		
	2036	
IC2008		
	2042, 2043 2044	
	329	
302, 301, 306		
2024, 2026	309	
Q, IC	D	ADJ



B | CCU USER CONTROL
RESET D/A CONV, R. G. B BUFFER
R. G. B INTER FACE

KV-25DXR
RM-727/APM-X3U

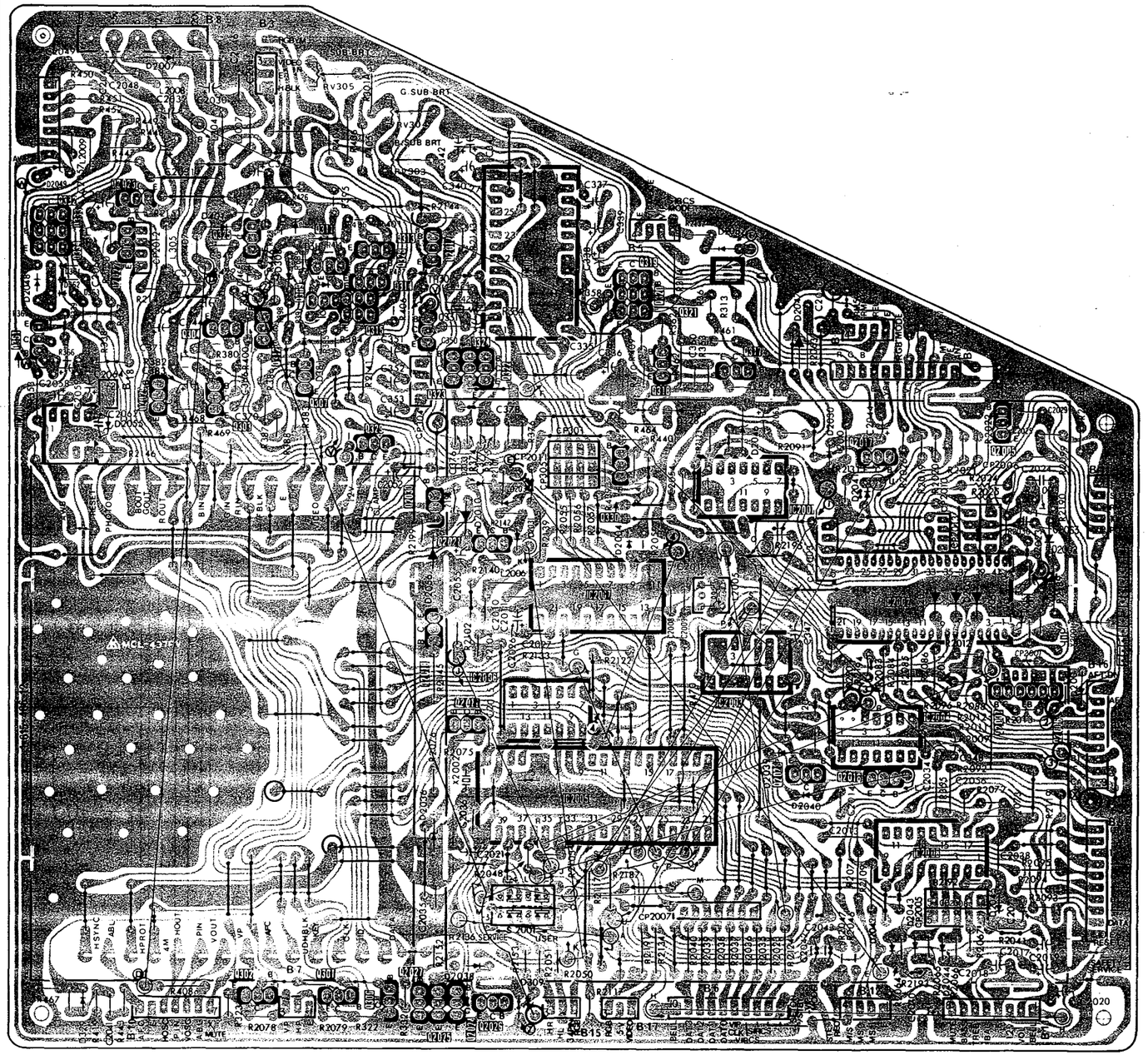
B | C [R. G. B OUT]

9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25

— B Board —

Q , IC	D	ADJ
	2007	RV305
		RV304
		RV303
2023		
332	401	
333 325		
334 2022, IC306 2012	2037	
328		
319	308	
320		
321		
304, 312		
	381	
323, 324, 318 322, 317		
307		
2029		
2005	328 2046	
	2055	
IC2009	2030	
329 2017		
330 IC2001	2033 2041	
	2034	
	2010 2002	
2030 2021	2031	
	2056	
IC2007 IC2002		
2018 IC2003	2053	
2007 2006	2001	
IC2006		
2011 IC2004	2039	
2028, 2016	2040	
IC2005		
	2036	
IC2008		
	2042, 2043 2044	
	329	
302, 301, 306		
2024, 2026	309	

Q , IC | D | ADJ



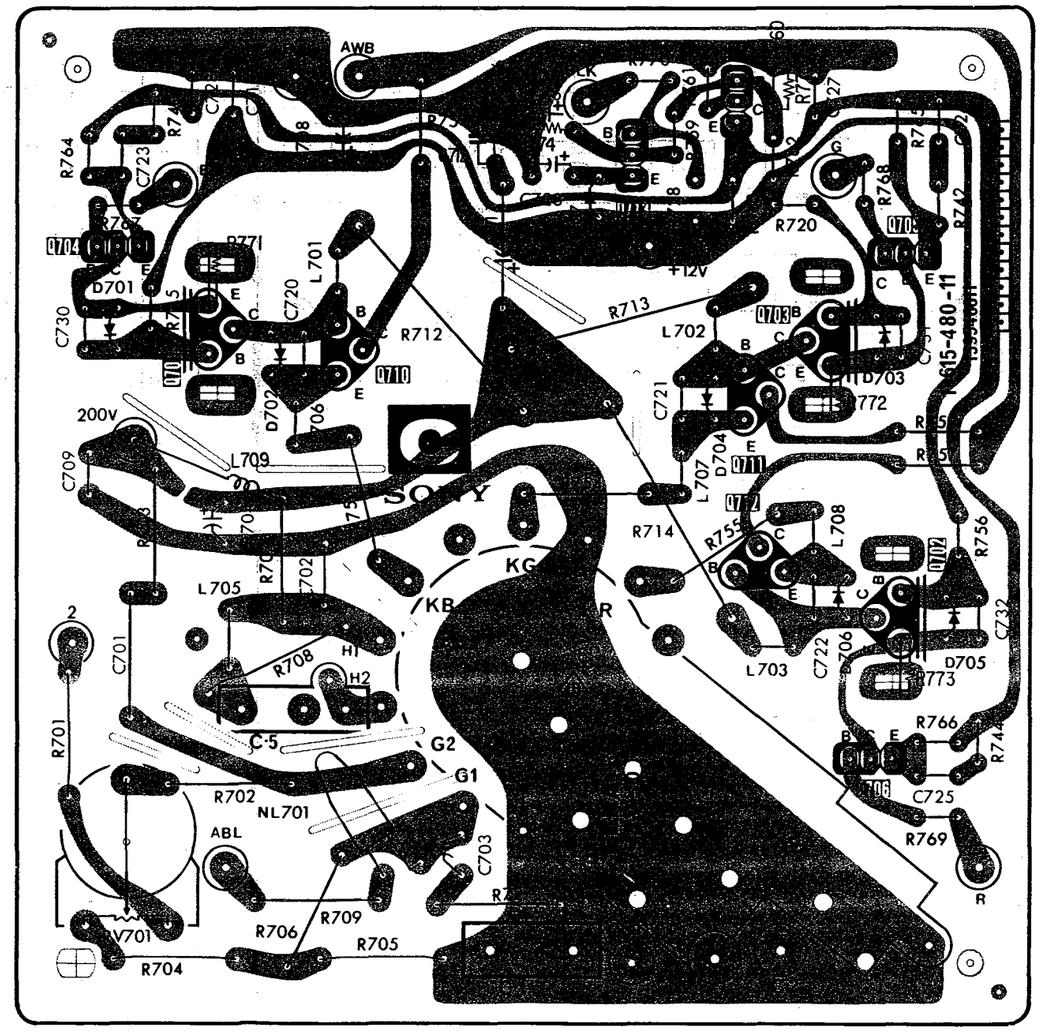
B C [R. G. B OUT]

[DPU, VCU CVPU CLOCK] BD

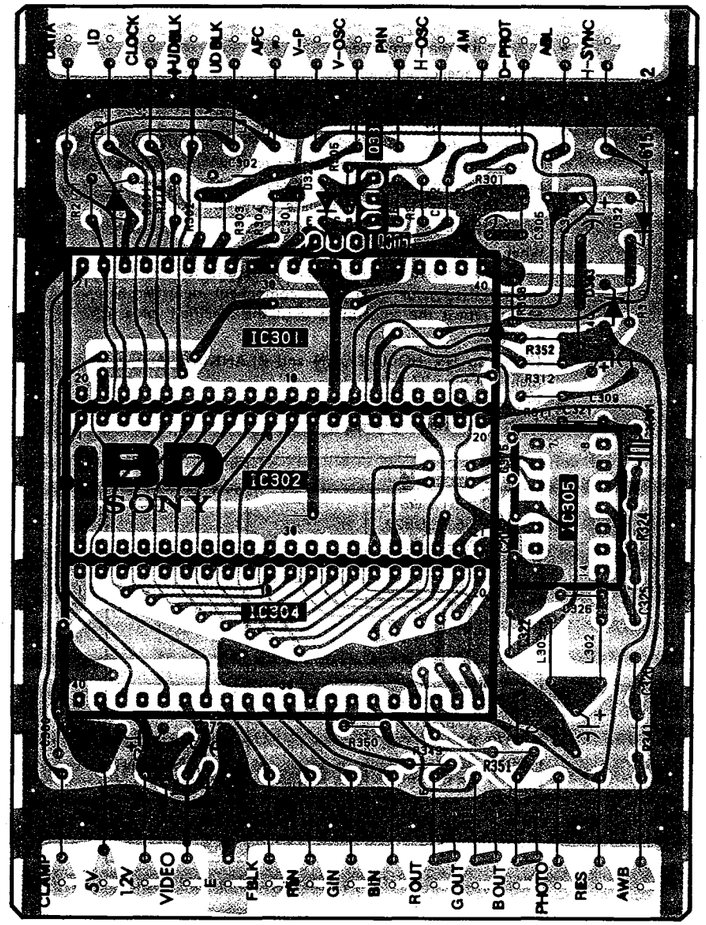
9 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35

A B C D E F G H I

— C Board —



— BD Board —



: Conductor side
: Component side

Note: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

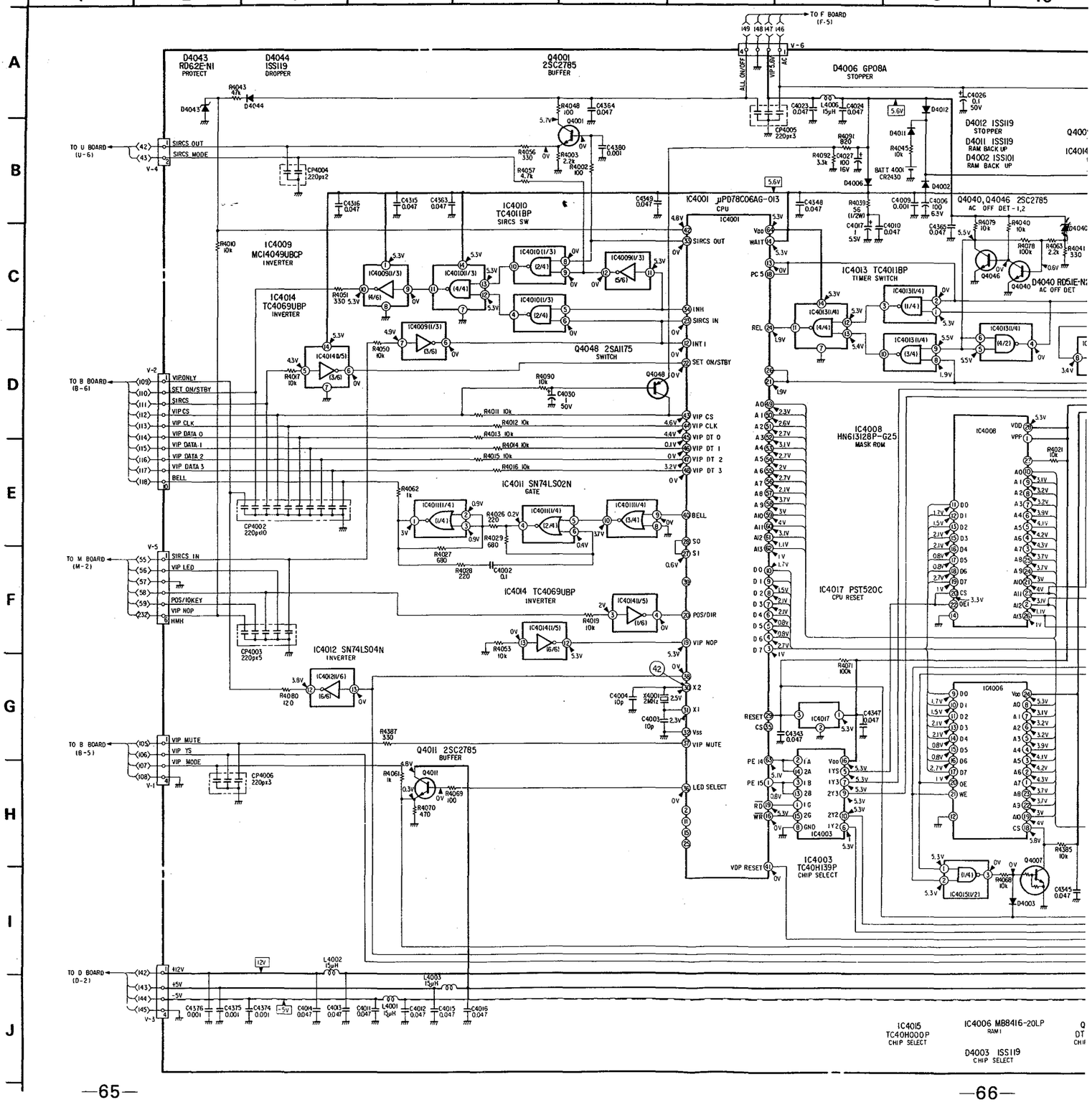
Note:

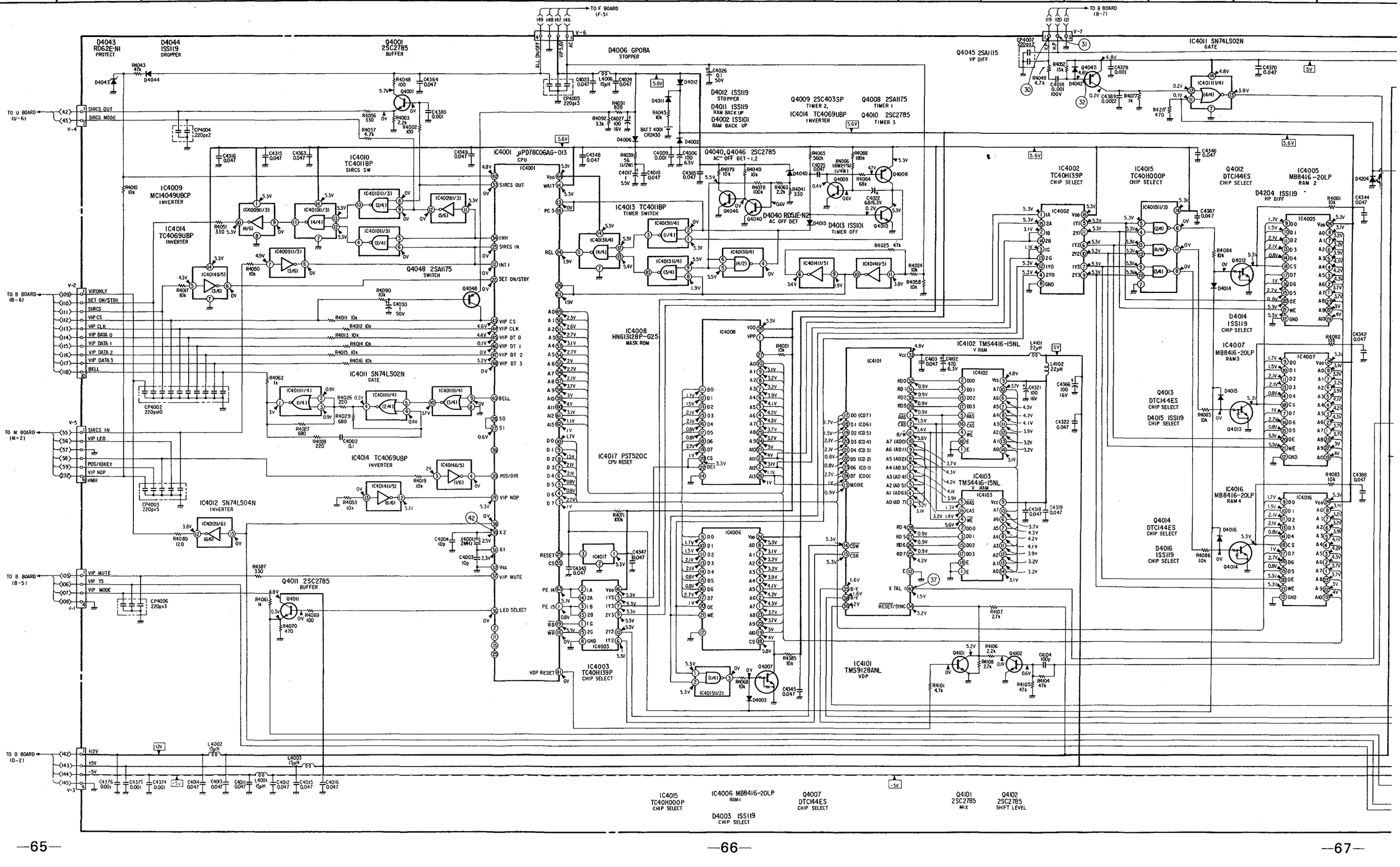
- All capacitors are in μF unless otherwise noted. pF : μμF
  50WV or less are not indicated except for electrolytics
- All resistors are in ohms, 1/6 W unless otherwise noted.
  kΩ : 1000Ω, MΩ : 1000kΩ
- : nonflammable resistor.
- △ : internal component.
- : panel designation.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- The components identified by ⚠ in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.
- When replacing components identified by ◪, make the necessary adjustments indicated. If results do not meet the specified value, change the component identified by ⚠ and repeat the adjustment until the specified value is achieved.
  (Refer to HV HOLD DOWN and BLANKING Adjustments on page 27 – 28).
- When replacing the part in below table, be sure to perform the related adjustment.

Part replaced (◪)		Adjustment
IC500, Q512, Q514, Q515, D518, D522, R533, R560, R570 R571, R572, R573, R574, R582, R583, R1500, R1502, R1503, R1504, R1522, R1530	on D board	HV HOLD DOWN ADJUSTMENT (R573)
Q713, Q714, D707, R728, R759, R760, R761, R762, R763, R770, R774, R775,	on C board	BLANKING ADJUSTMENT (R534)
Q507, D500, D501, R532, R534, R536, R584	on D board	
Q2012, R2141, R2143, R2144	on B board	

- Voltages are dc with respect to ground unless otherwise noted.
- Readings are taken with a 10MΩ digital multimeter.
- : adjustment for repair.
- Readigns are taken with color-bar signal input.
- Voltage variations may be noted due to normal production tolerances.
- : B+ bus.
- : B- bus.
- Circled numbers are waveform references.

KV-25DXR
RM-727/APM-X3U




1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17
D4043 RD62E-N1 PROTECT
D4044 1SS119 DROPPER
Q4001 2SC2785 BUFFER
D4006 GP08A STOPPER
D4012 1SS119 STOPPER
D4011 1SS119 RAM BACK UP
D4002 1SS101 RAM BACK UP
Q4009 2SC403SP TIMER 2,
IC4014 TC4069UBP INVERTER
Q4008 2SA1175 TIMER 1
Q4010 2SC2785 TIMER 3
Q4045 2SA1115 VP DIFF
IC4011 SN74LS02N GATE
IC4001 μPD78C06AG-013 CPU
Q4040,Q4046 2SC2785 AC OFF DET-1,2
D4040 RD5JE-N2 AC OFF DET
D4013 1SS101 TIMER OFF
IC4009 MC14049UBCP INVERTER
IC4010 TC4011BP SIRCS SW
Q4048 2SA1175 SWITCH
IC4013 TC4011BP TIMER SWITCH
IC4002 TC40H139P CHIP SELECT
IC4015 TC40H000P CHIP SELECT
Q4012 DTC144ES CHIP SELECT
IC4005 MB8416-20LP RAM 2
D4204 1SS119 HP DIFF
D4014 1SS119 CHIP SELECT
IC4007 MB8416-20LP RAM3
Q4013 DTC144ES CHIP SELECT
D4015 1SS119 CHIP SELECT
IC4016 MB8416-20LP RAM 4
Q4014 DTC144ES CHIP SELECT
D4016 1SS119 CHIP SELECT
IC4008 HN61328P-G25 MASK ROM
IC4102 TMS4416-15NL V RAM
IC4103 TMS4416-15NL V RAM
IC4017 PST520C CPU RESET
IC4003 TC40H139P CHIP SELECT
IC4101 TMS9128ANL VDP
IC4012 SN74LS04N INVERTER
Q4011 2SC2785 BUFFER
TO F BOARD (F-5)
TO B BOARD (B-7)
TO U BOARD (U-6)
TO B BOARD (B-6)
TO M BOARD (M-2)
TO B BOARD (B-5)
TO D BOARD (D-2)
SIRCS OUT
SIRCS MODE
VIP ONLY
SET ON/STBY
SIRCS
VIP CS
VIP CLK
VIP DATA 0
VIP DATA 1
VIP DATA 2
VIP DATA 3
BELL
SIRCS IN
VIP LED
POS/IOKEY
VIP NOP
HMH
VIP MUTE
VIP YS
VIP MODE
+12V
+5V
-5V
INH
SIRCS IN
INT I
SET ON/STBY
VIP CS
VIP CLK
VIP DT 0
VIP DT 1
VIP DT 2
VIP DT 3
BELL
SO
SI
POS/DIR
VIP NOP
X2
X1
Vss
VIP MUTE
LED SELECT
VDP RESET
RESET
CS
PE I4
PE I5
RD
WR
WAIT
REL
PC 5
ALL ON/OFF
VIP 5.6V
ACC
BATT 4001 CR2430
CSW
CSR
B-Y
R-Y
X TAL 1
RESET/SYNC
MODE

13 14 15 16 17 18 19 20 21 22 23 24 25 26

A B C D E F G H I J

(COMPARATOR, CPU, VDP, COUNT DOWN VIP, R.G.B. MIX, V RAM, MASKROM) V

TO B BOARD (B-7)

IC4011 SN74LS02N GATE

IC4002 TC40H139P CHIP SELECT

IC4015 TC40H000P CHIP SELECT

Q4012 DTC144ES CHIP SELECT

IC4005 MB8416-20LP RAM 2

D4204 1SS119 HP DIFF

D4014 1SS119 CHIP SELECT

IC4007 MB8416-20LP RAM3

Q4013 DTC144ES CHIP SELECT

D4015 1SS119 CHIP SELECT

IC4102 TMS4416-15NL V RAM

IC4103 TMS4416-15NL V RAM

IC4016 MB8416-20LP RAM 4

Q4014 DTC144ES CHIP SELECT

D4016 1SS119 CHIP SELECT

IC4201 TC5081AP PLL

Q4203 2SC403SP OSC

Q4204, 4205 2SC403SP AMP-1,2

Q4318 2SA1175 HP DIFF

Q4201, 4202 2SC2785 I.PF

D4201 1SS119 PLL

IC4012 SN74LS04N INVERTER

IC4202 SN74LS76AN DIVIDER

IC4203 SN74LS163AN COUNT DOWN

IC4204 SN74LS163AN COUNT DOWN

IC4205 SN74LS163AN COUNT DOWN

D4205 1SS119 HP DIFF

IC4012 SN74LS04N INVERTER

IC4012 SN74LS04N INVERTER

IC4012 SN74LS04N INVERTER

IC4303 μPC324C DC AMP

IC4302 CX20060 SWITCH

Q4303 2SC2785 AMP

Q4304 2SC2785 BUFFER

Q4305 2SA1175 MIX

IC4301 μPD4066BC SWITCH

Q4302 2SA1175 BUFFER

Q4306,4307 2SA1175 MIX

Q4310 2SC2785 AMP

Q4311 2SC2785 BUFFER

Q4312 2SA1175 MIX

IC4301 μPD4066BC SWITCH

IC4303 μPC324C DC AMP

IC4304 CX20060 SWITCH

Q4309 2SA1175 BUFFER

Q4314 2SA1175 BUFFER

Q4315 2SC2785 AMP

Q4316 2SC2785 BUFFER

D4301 RD47E-N1 SHIFT LEVEL

IC4305 SN75I0AN COMPARATOR

Q4317 2SA1175 BUFFER

Q4102 2SC2785 SHIFT LEVEL

CP4008 220pf×4

VIP R
VIP G
VIP B
VIP MODE

TO U BOARD (U-11)

V-8

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

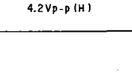
A B C D E F G H I

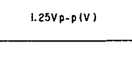
(30)

4Vp-p (V)

(31)

4.2Vp-p (H)

(32)

1.25Vp-p (V)

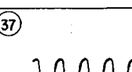
(33)

4Vp-p (H)

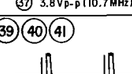
(34)

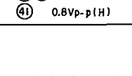
3.6Vp-p (H)

(35)

3Vp-p (0.045μsec)

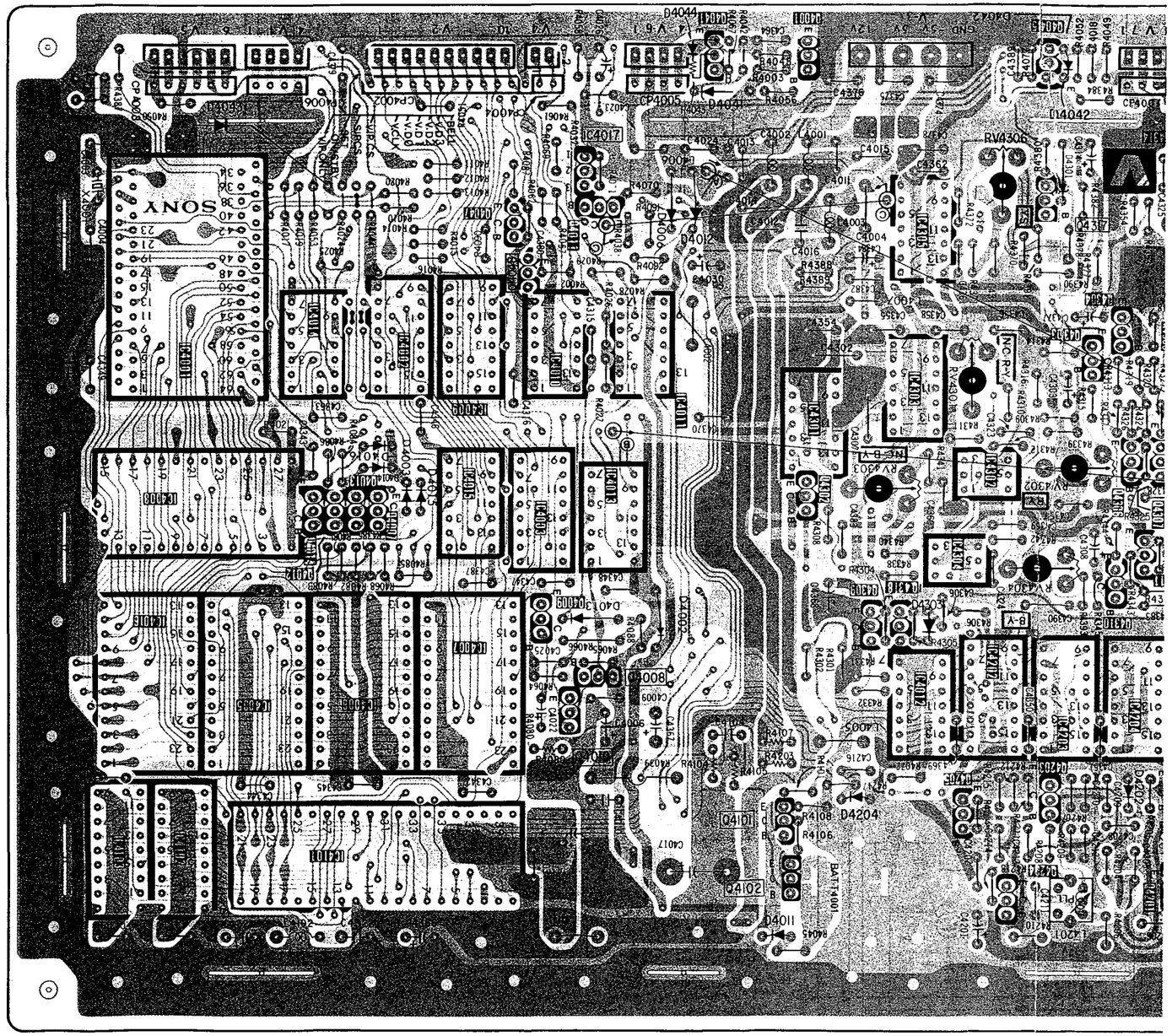
(36) (37)

(36) 3.4Vp-p (10.7MHz)
(37) 3.8Vp-p (10.7MHz)

(38) (39) (40) (41)

(38) 0.4Vp-p (H)
(39) (40) 0.38Vp-p (H)
(41) 0.8Vp-p (H)

(42)

5.4Vp-p (0.255μsec)

— V Board —

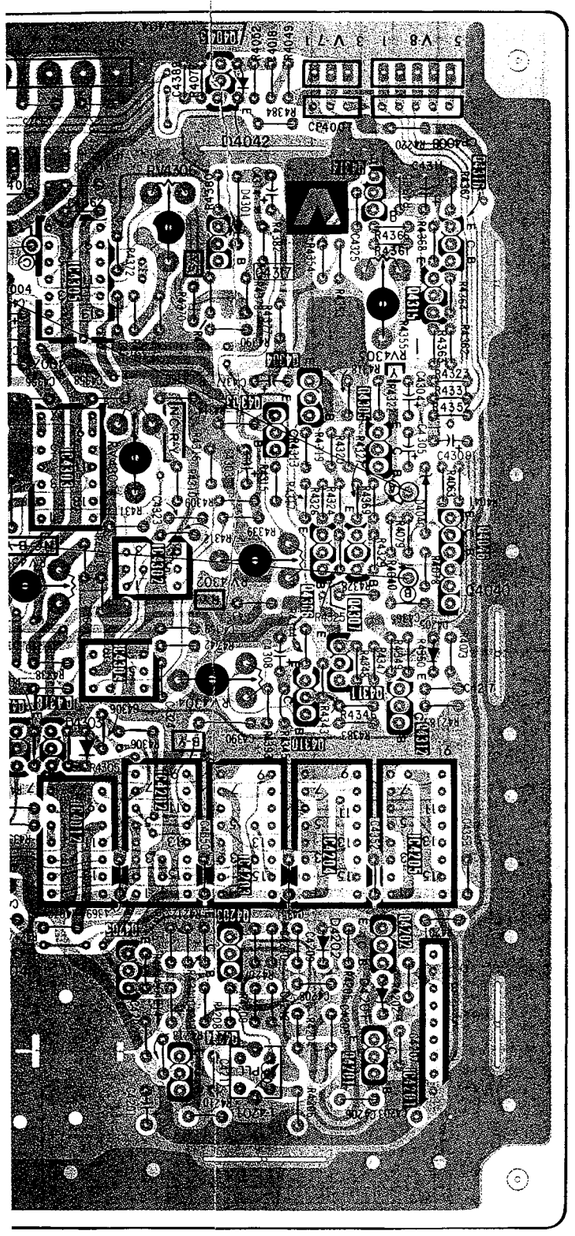
Q, IC	D	ADJ
4001 4045	4044 4042	
4043 4301		
IC4017 4317 4011	4006	RV4306
IC4305 4314 4316 4315	4012	
IC4001 4048		RV4305
IC4014, IC4002 IC4009, IC4010 IC4011	4304 4303 4305	
IC4303	4040	RV4301
IC4301 IC4302	4046 4306 4307	RV4302
4302	4040	RV4303
IC4008 IC4015 4014, 4007 4013, 4012	IC4003 IC4013 4311 IC4304 4310 4312	4205 RV4304
4009 IC4007 4309 IC4016 4318 IC4006 4008 IC4005 4010	IC4012 IC4202 IC4203 IC4204 IC4205	4013 4002 4303
4205 4203 4202		4204
IC4103 4101 IC4102 IC4201 IC4101 4201 4102 4204		4202 4201
	4011	
Q, IC	D	ADJ



KV-25DXR
RM-727/APM-X3U

15 16 17 18 19

A B C D E F G H I



: Conductor side
: Component side

Note: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

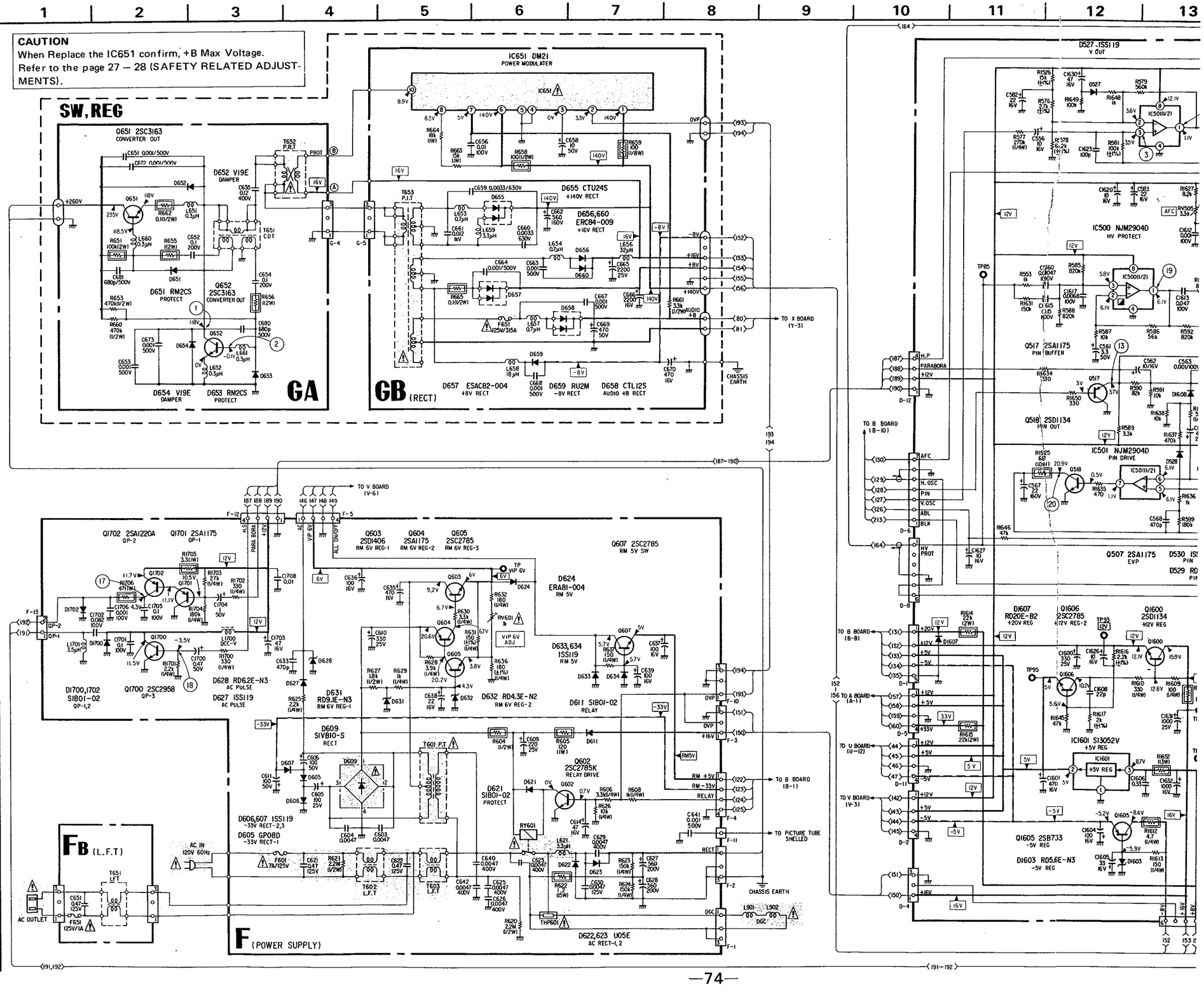
Note:

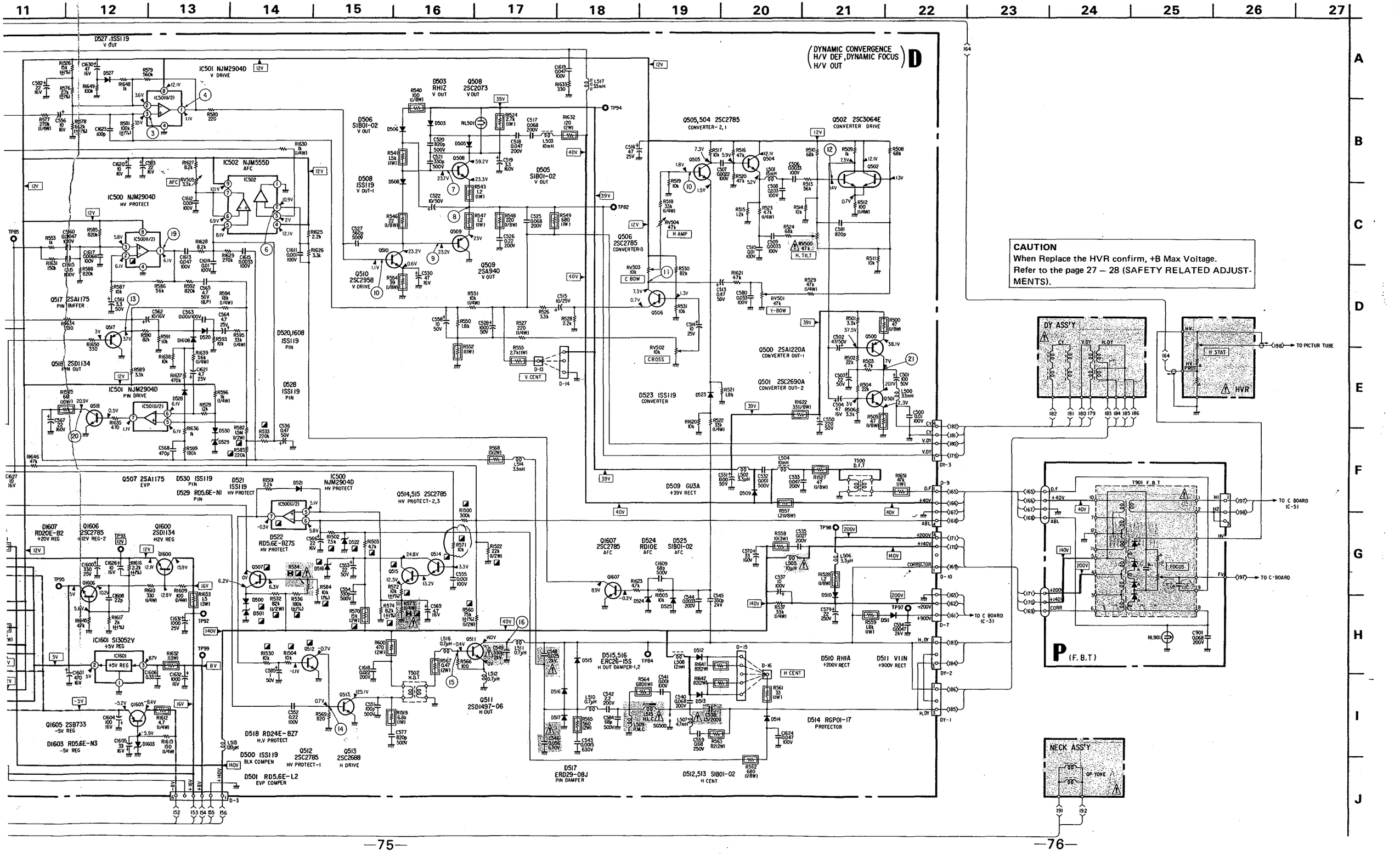
- All capacitors are in μF unless otherwise noted. pF : μμF 50WV or less are not indicated except for electrolytics
- All resistors are in ohms, 1/6 W unless otherwise noted. kΩ : 1000Ω, MΩ : 1000kΩ
- ▭ : nonflammable resistor.
- △ : internal component.
- ▭ : panel designation.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- The components identified by ⧓ in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.
- When replacing components identified by ◪ , make the necessary adjustments indicated. If results do not meet the specified value, change the component identified by ⧓ and repeat the adjustment until the specified value is achieved.
  (Refer to HV HOLD DOWN and BLANKING Adjustments on page 27 – 28).
- When replacing the part in below table, be sure to perform the related adjustment.

Part replaced (◪)		Adjustment
IC500, Q512, Q514, Q515, D518, D522, R533, R560, R570 R571, R572, R573, R574, R582, R583, R1500, R1502, R1503, R1504, R1522, R1530	on D board	HV HOLD DOWN ADJUSTMENT (R573)
Q713, Q714, D707, R728, R759, R760, R761, R762, R763, R770, R774, R775,	on C board	BLANKING ADJUSTMENT (R534)
Q507, D500, D501, R532, R534, R536, R584	on D board	
Q2012, R2141, R2143, R2144	on B board	

- Voltages are dc with respect to ground unless otherwise noted.
- Readings are taken with a 10MΩ digital multimeter.
- ▭ : adjustment for repair.
- Readigns are taken with color-bar signal input.
- Voltage variations may be noted due to normal production tolerances.
- ▭ : B+ bus.
- ▭ : B- bus.
- Circled numbers are waveform references.

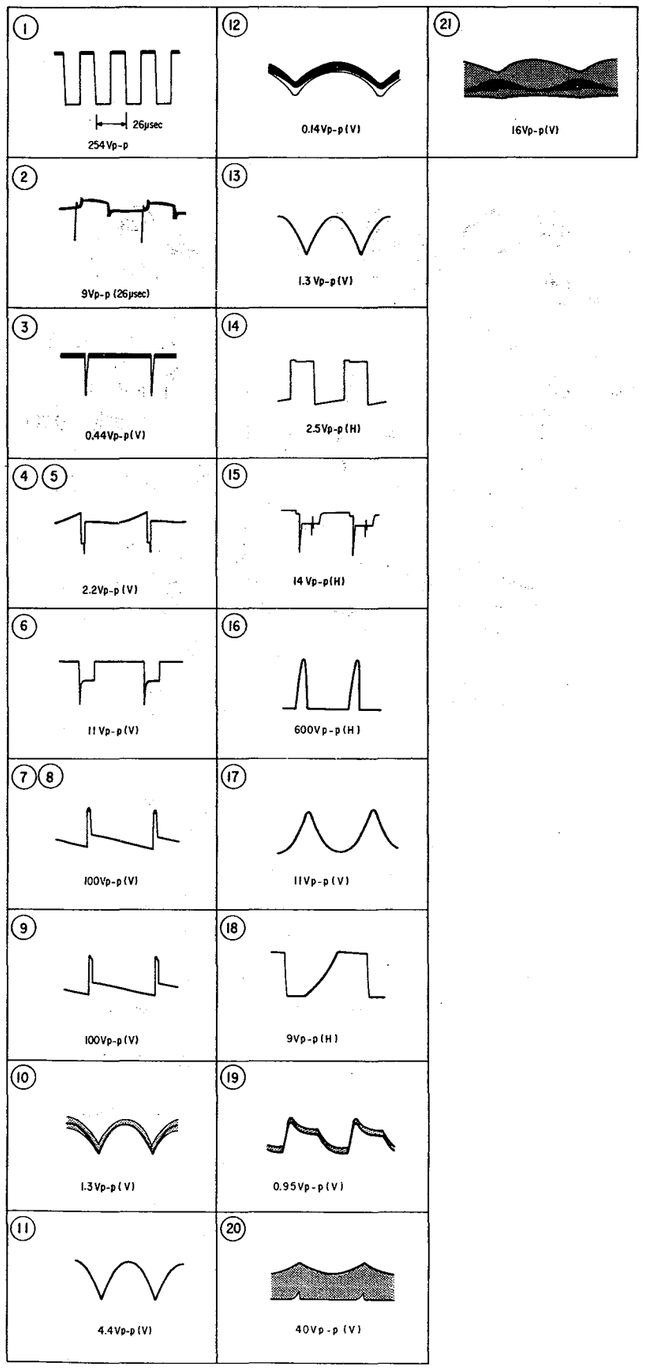
CAUTION
When Replace the IC651 confirm, +B Max Voltage.
Refer to the page 27 – 28 (SAFETY RELATED ADJUSTMENTS).




11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27
A B C D E F G H I J
(DYNAMIC CONVERGENCE H/V DEF, DYNAMIC FOCUS H/V OUT) D
CAUTION
When Replace the HVR confirm, +B Max Voltage.
Refer to the page 27 – 28 (SAFETY RELATED ADJUSTMENTS).
IC501 NJM2904D V DRIVE
IC502 NJM555D AFC
IC500 NJM2904D HV PROTECT
IC501 NJM2904D PIN DRIVE
IC1601 SI3052V +5V REG
D503 RHIZ V OUT
Q508 2SC2073 V OUT
D506 SIB01-02 V OUT
D508 ISS119 V OUT-1
D505 SIB01-02 V OUT
Q509 2SA940 V OUT
Q510 2SC2958 V DRIVE
Q505,504 2SC2785 CONVERTER-2,1
Q502 2SC3064E CONVERTER DRIVE
Q506 2SC2785 CONVERTER-3
Q500 2SA1220A CONVERTER OUT-1
Q501 2SC2690A CONVERTER OUT-2
D523 ISS119 CONVERTER
D509 GU3A +39V RECT
D510 RHIA +200V RECT
D511 V11N +900V RECT
D514 RGP01-17 PROTECTOR
D515,516 ERC26-15S H OUT DAMPER-1,2
D517 ERD29-08J PIN DAMPER
D512,513 SIB01-02 H CENT
Q517 2SA1175 PIN BUFFER
Q518 2SD1134 PIN OUT
D520,1608 ISS119 PIN
D528 ISS119 PIN
Q507 2SA1175 EVP
D530 ISS119 PIN
D529 RD5.6E-N1 PIN
D521 ISS119 HV PROTECT
IC500 NJM2904D HV PROTECT
D522 RD5.6E-BZ7S HV PROTECT
Q514,515 2SC2785 HV PROTECT-2,3
Q1607 2SC2785 AFC
D524 RD10E AFC
D525 SIB01-02 AFC
D1607 RD20E-B2 +20V REG
Q1606 2SC2785 +12V REG-2
Q1600 2SD1134 +12V REG
D1605 2SB733 -5V REG
D1603 RD5.6E-N3 -5V REG
D500 ISS119 BLK COMPEN
Q512 2SC2785 HV PROTECT-1
Q513 2SC2688 H DRIVE
D501 RD5.6E-L2 EVP COMPEN
D518 RD24E-BZ7 H.V PROTECT
Q511 2SD1497-06 H OUT
DY ASS'Y
H.STAT
HV PROT
HVR
TO PICTUR TUBE
NECK ASS'Y
OP YOKE
T901 F.B.T
FOCUS
TO C BOARD (C-5)
TO C BOARD (C-3)
TO C-BOARD
P (F.B.T)

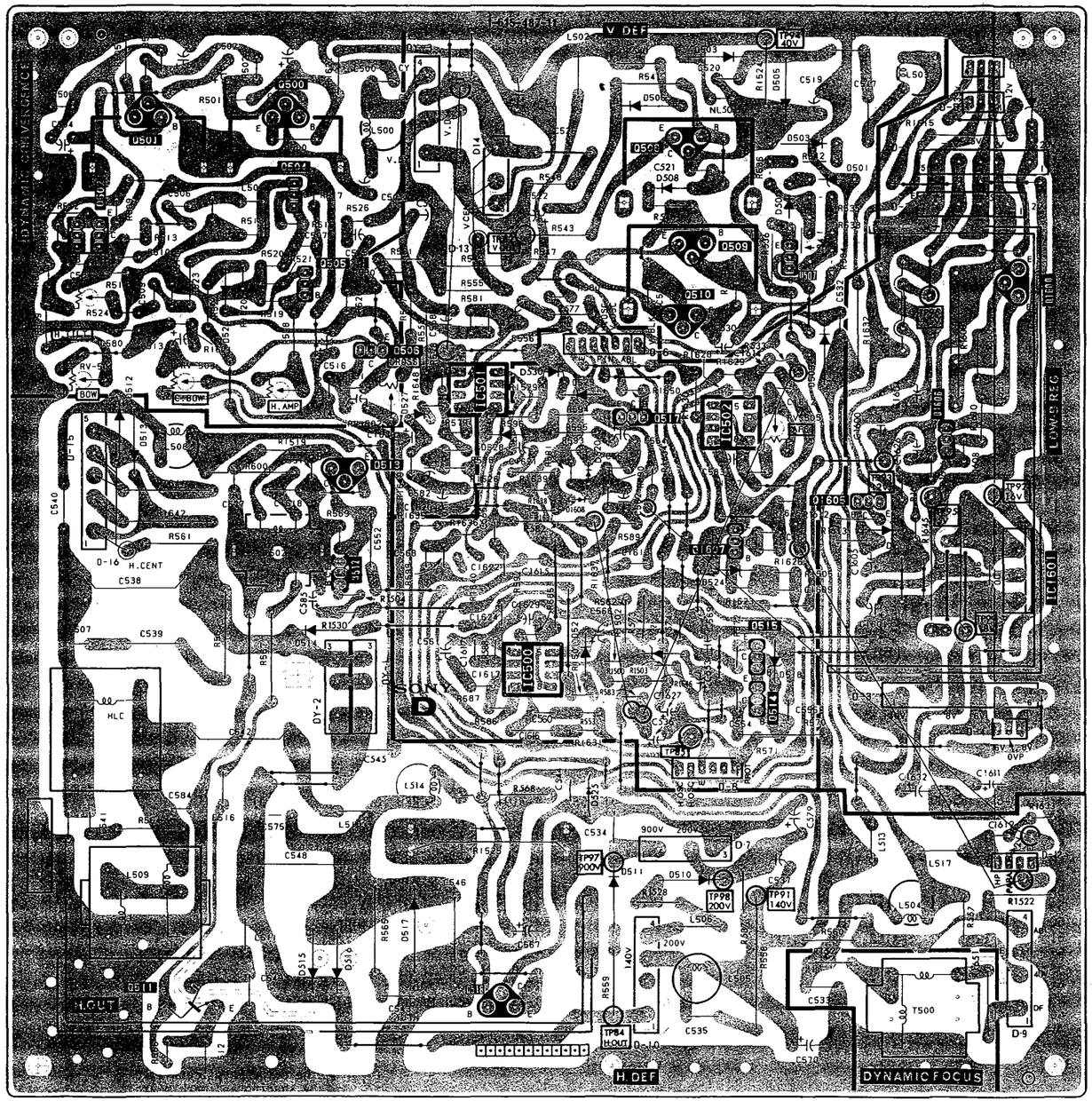
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17

A B C D E F G H I



— D Board —

Q, IC	D	ADJ	TP
			94
	503		
	505		
	1607		
	506		
501,500			
508			
	508		
502			
509,507			
1600			82
505	523	RV500	96
510			
	509		
506			
	530	RV501,503 RV504,502	
IC501	529		
	512		
517	527		
IC502	513 528	RV505	
1606			93
513	520		
			95 92
1605	1608		
	1603		
1607			
512	524		
	514		99
515	521,522		
514	518		
IC500			
			85
	525		
			97
	511		98
	510		91
	517		
	515		
	516		
511, 518			
			84
Q, IC	D	ADJ	TP



— F Board —

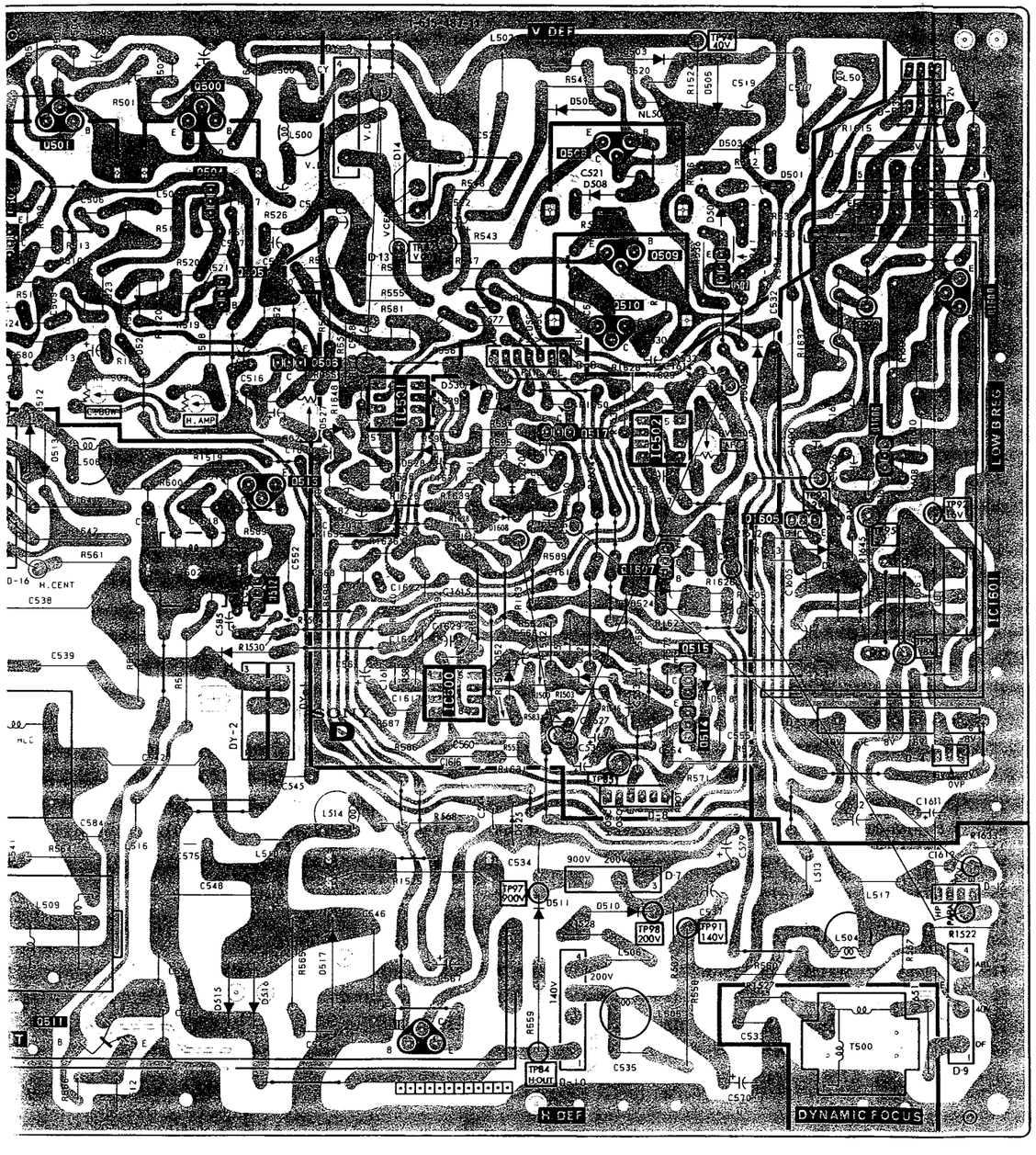
Q	D
	623
602	622
607	634
	611
603	
1702 1701	
604	633,6 1702
605	609
	632
1700	628, 1700
Q	D

D

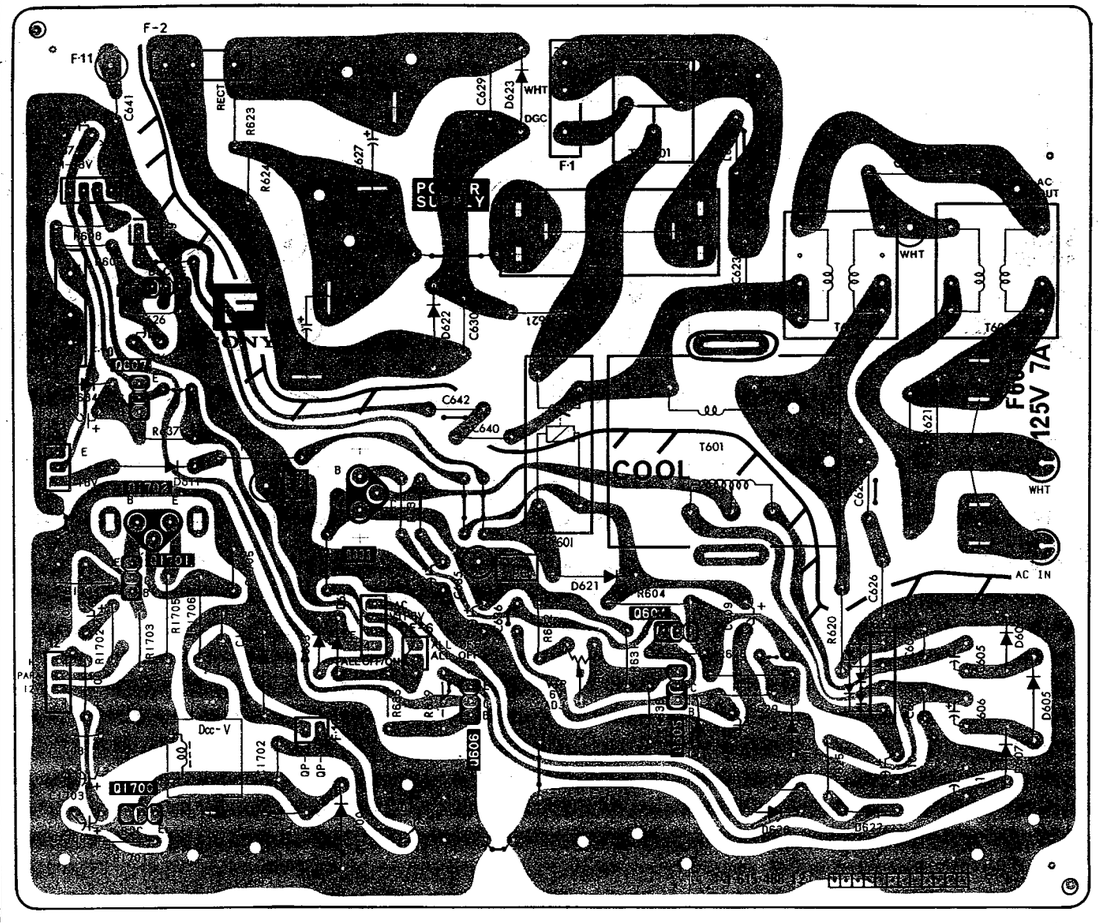
[POWER SUPPLY] F GA [SW REG]

9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25

— F Board —



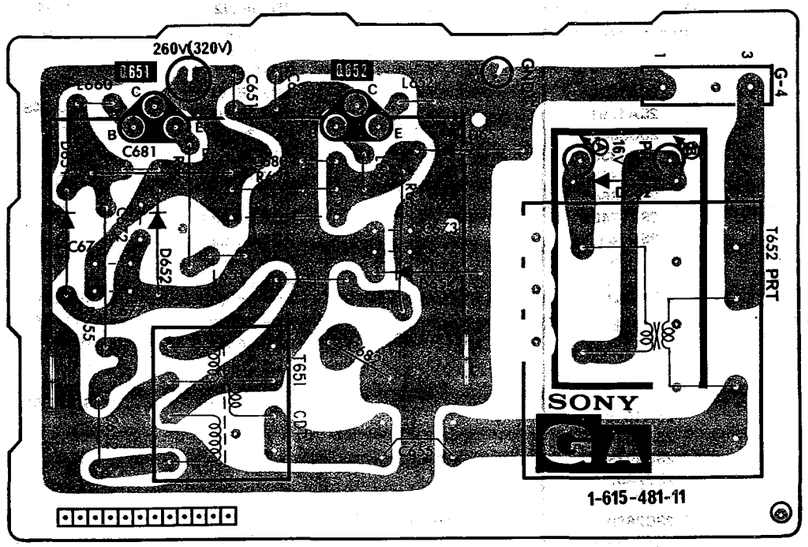
Q	D	ADJ
	623	
602	622	
607	634	
603	611	
1702 1701	621	
604	606	
	633,624 1702	RV 601
605	609,605	
	632,631 607	
1700	628,627 1700	



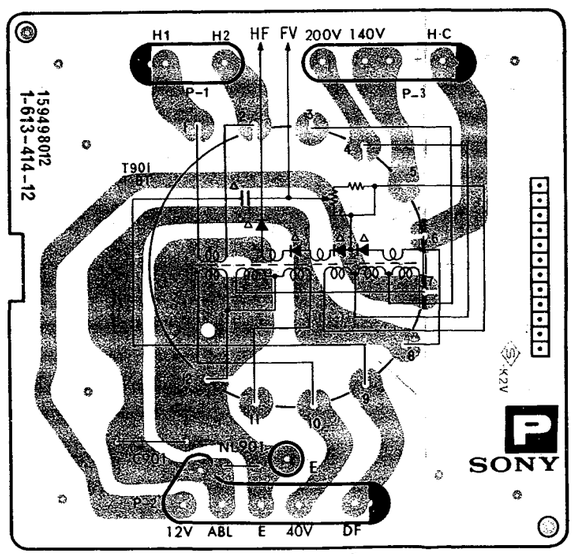
9 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35

A B C D E F G H I

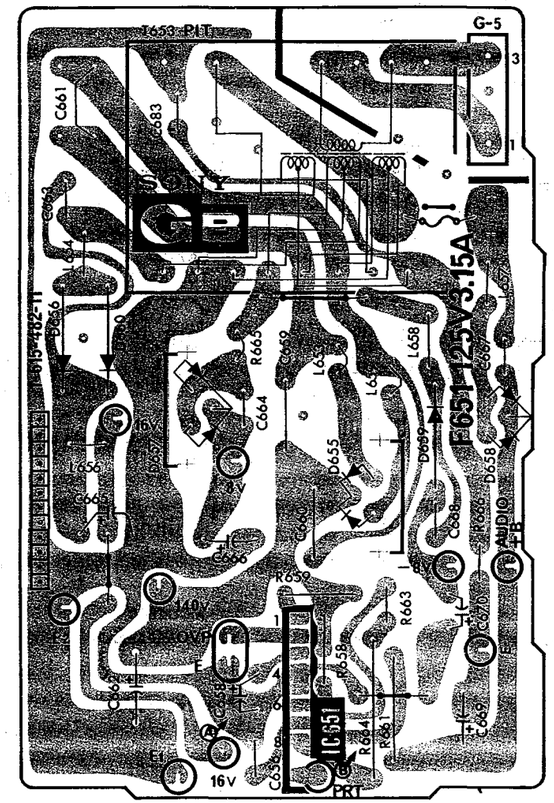
— GA Board —



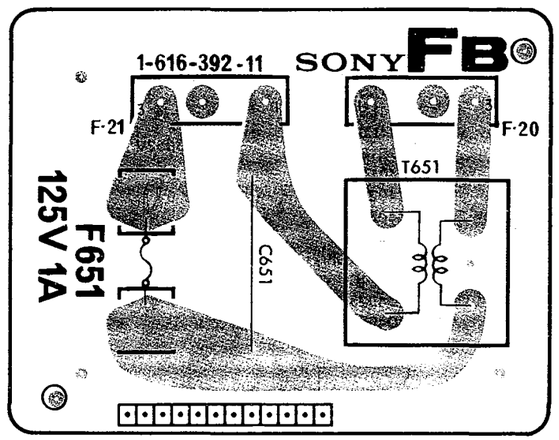
— P Board —



— GB Board —

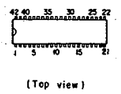


— FB Board —

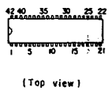


4-6. SEMICONDUCTORS

AN6291

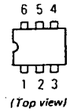


CCUSONY-02

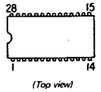


CVPU2210
DPU2500

CX20060

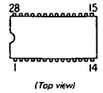


CX20014A
CX20100

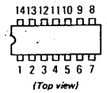


CX20106
CX20106A

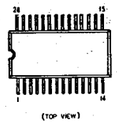
CX10026



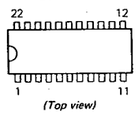
CX20139
HD14562BP
MC14049UBCP
MC14551BCP
MB84049UB
SN74LS76AN
SN74LS163AN
TC4049BP
TC4052BP
TC40H139P
μPD4052BC



CX23040



CX7958



CX530-507N

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HD14011BP
HD14069UBP
HD74LS02P
HD74LS04P
HD74LS09P
MC14562BCP
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SN74LS04N
SN74LS09N
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TC40H000P
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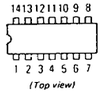
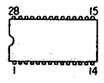


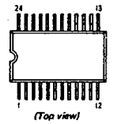
HN613128P



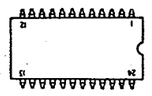
LA3375

LA7910
TC5081AP

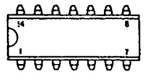
MB8416-20LP



MCU2600



MDA2061



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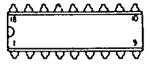
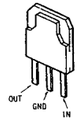


S13052V



TA7133P

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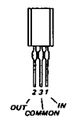
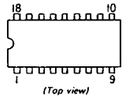
NJM4558D
NJM555D
TL7705CP
μPC4558C

NJM78L05A
TA78L005AP

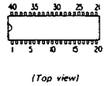


STK4362

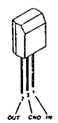
TMS4416-15NL



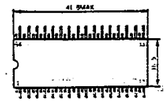
TMS9128ANL
VCU2100F



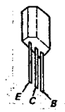
μPC78L05A



μPD78C06AG-013-36



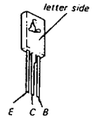
2SA1026
2SA1091
2SC380TS
2SC933S
2SC1363
2SC1364
2SC1740S
2SD788



2SA1048-GR
2SA1115
2SC403SP
2SC2458
2SC2603
2SC2669
DTC144ES

2SA1175
2SC2785

2SA1220A
2SC2611
2SC2688
2SC2690A



2SB733
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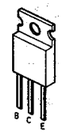
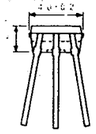
2SD773

2SC2073
2SC3163
2SD1134
2SD1406

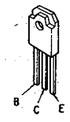
2SA940



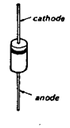
2SC3064E



2SD1497-06



10E2
10E-2
ERA81-004
ERB12-02RK
ERB12-02RK
ES1F
RGP01-17



1SS101
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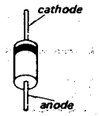
ERD29-08J
RD10E
RD10E-N2
RD20E-B2
RD24E-BZ7
RD33E-B2
RD3.6E-N1
RD3.6E-N2
RD4.3E-N2
RD4.7E-N1
RD5.1E-B2
RD5.1E-N2
RD5.6E-BZ7S
RD5.6E-L2
RD5.6E-N1
RD5.6E-N2
RD5.6E-N3
RD6.2E-N2
RD6.2E-N3
RD8.2E-N2
RD9.1E-N3
EQA02-06D5



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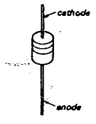
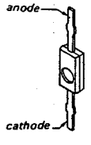
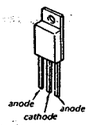
1SS120
1SS133
1SS148



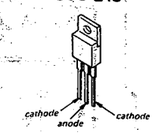
1T32
1T32-2



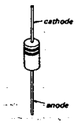
CTL12S
ESC82-004



CTU-24S

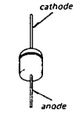


GP08A
GP08D
RH1A
RH1Z
RU2M
SIB01-02

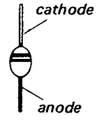


ERC26-15S

ERC84-009

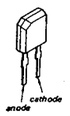


GH3F
GU3A
U05E
U05G
V11N

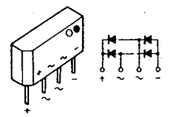


HZT33-02

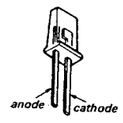
PH302B



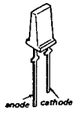
S1VB10-S
S1VB20



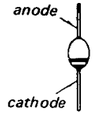
SR632D



SY432D



V19E



μPC574J

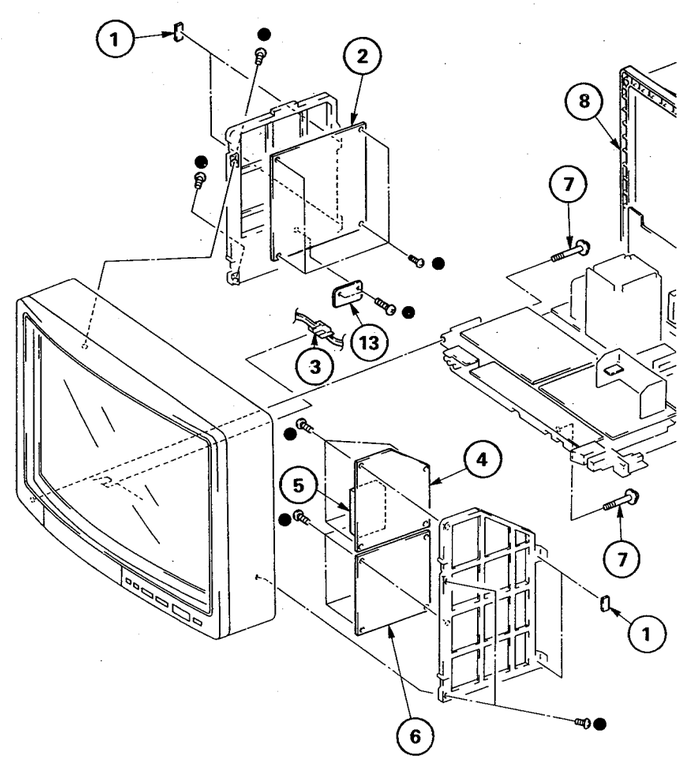
KV-25DXR
RM-727/APM-X3U

NOTE:
- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.

- Items marked " ★ " are not st they are seldom required service. Some delay should b when ordering these items.

5-1. BACK COVER

● : TA, BV3 x 12 7-685-648-71
TA, BV4 x 16 7-685-663-71

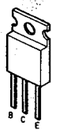


No.	Part No.	Description	Remark
1	9-911-830-XX	CUSHION, (C)	
2	*A-1345-537-A	D BOARD, COMPLETE	
3	⚠4-374-307-02	HOLDER, CORD, AC	
4	*A-1135-313-A	B BOARD, COMPLETE	5
5	A-1499-404-A	BD SHIELD, ASSY	
6	*A-1394-058-A	V BOARD, COMPLETE	
7	4-319-5		
8	X-4374-		
9	X-4374-		
10	4-329-1		
11	*4-374-4		
12	⚠1-557-7		
13	*1-616-3		

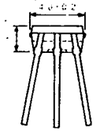
2SB733
2SC2958
2SC2959
2SD773

2SC2073
2SC3163
2SD1134
2SD1406

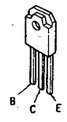
2SA940



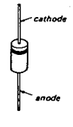
2SC3064E



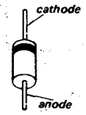
2SD1497-06



10E2
10E-2
ERA81-004
ERB12-02RK
ERB12-02RK
ES1F
RGP01-17

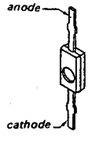


1SS101
EM1Z
ERD29-08J
RD10E
RD10E-N2
RD20E-B2
RD24E-BZ7
RD33E-B2
RD3.6E-N1
RD3.6E-N2
RD4.3E-N2
RD4.7E-N1
RD5.1E-B2
RD5.1E-N2
RD5.6E-BZ7S
RD5.6E-L2
RD5.6E-N1
RD5.6E-N2
RD5.6E-N3
RD6.2E-N2
RD6.2E-N3
RD8.2E-N2
RD9.1E-N3
EQA02-06D5

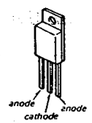


1SS119
1SS120
1SS133
1SS148

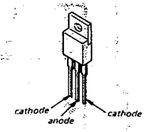
1T32
1T32-2



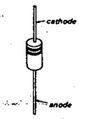
CTL12S
ESC82-004



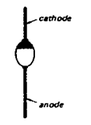
CTU-24S



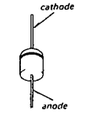
GP08A
GP08D
RH1A
RH1Z
RU2M
SIB01-02



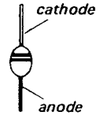
ERC26-15S



ERC84-009

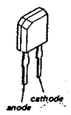


GH3F
GU3A
U05E
U05G
V11N

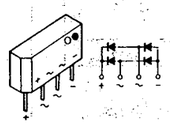


HZT33-02

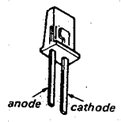
PH302B



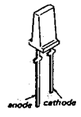
S1VB10-S
S1VB20



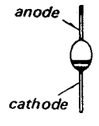
SR632D



SY432D



V19E



μPC574J

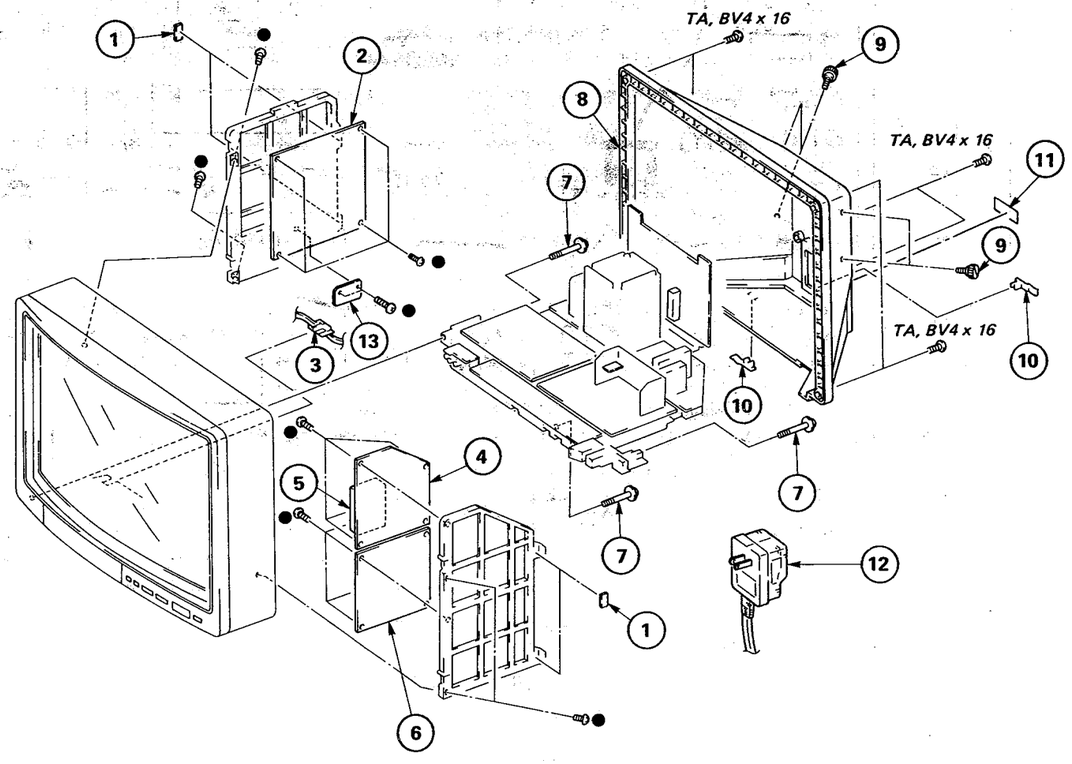
SECTION 5
EXPLODED VIEWS

NOTE:
- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

5-1. BACK COVER

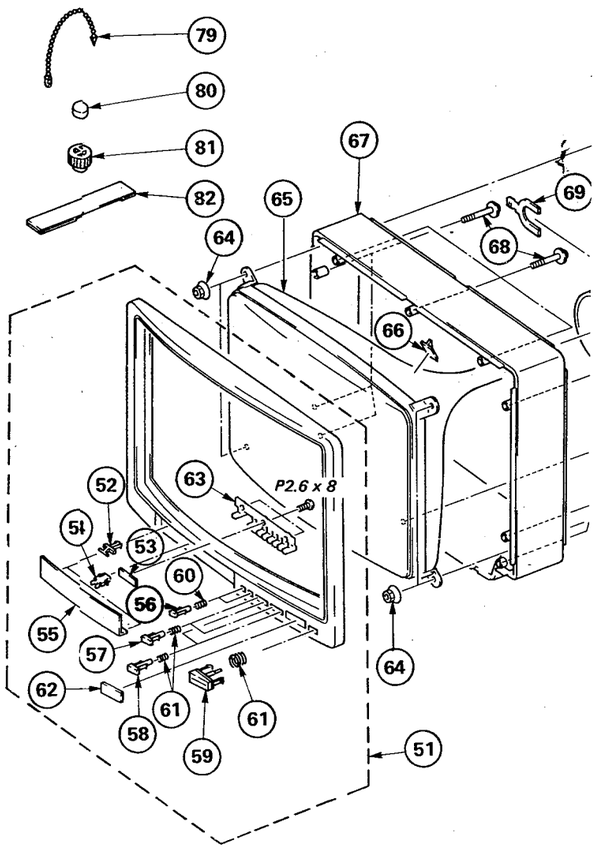
● : TA, BV3 x 12 7-685-648-71
TA, BV4 x 16 7-685-663-71



No.	Part No.	Description	Remark
1	9-911-830-XX	CUSHION, (C)	
2	*A-1345-537-A	D BOARD, COMPLETE	
3	⚠4-374-307-02	HOLDER, CORD, AC	
4	*A-1135-313-A	B BOARD, COMPLETE	5
5	A-1499-404-A	BD SHIELD, ASSY	
6	*A-1394-058-A	V BOARD, COMPLETE	
7	4-319-520-00	SCREW, SPECIAL (+PW4X30)	
8	X-4374-303-1	COVER ASSY, BACK	9,10
9	X-4374-104-1	SCREW (B) ASSY, ORNAMENTAL	
10	4-329-127-00	CLAMP, CORD	
11	*4-374-464-01	LABEL, MODEL NUMBER	
12	⚠1-557-761-11	CORD, POWER	
13	*1-616-392-11	FB BOARD	

5-2. CRT

TA, BV4 x 10 7-685-660-01
P2.6 x 8 7-685-134-14



No.	Part No.	Description	Remark
51	X-4374-133-1	BEZEL ASSY	52-63
52	3-662-365-00	SHAFT (S), DOOR	
53	4-374-115-01	EMBLEM, SONY	
54	4-352-034-00	CATCHER, PUSH	
55	X-4374-132-1	DOOR ASSY, CONTROL	
56	X-4374-101-1	BUTTON (A) ASSY	
57	X-4374-102-1	BUTTON (B) ASSY	
58	X-4374-103-1	BUTTON (C) ASSY	
59	X-4374-301-1	BUTTON ASSY, POWER	
60	3-571-847-00	SPRING, COMPRESSION	
61	3-561-888-02	SPRING, COMPRESSION	
62	*4-374-135-21	PLATE, TRANSPARENT	
63	4-374-126-11	BUTTON (D), MULTI	
64	4-330-305-00	NUT, SPECIAL	
65	⚠8-736-652-05	CRT (A64JKJ10X)	
66	3-703-003-00	SPACER, DY	
67			
68			
69			
70	⚠		
71	⚠		
72	*		
73			
74	⚠		
75			
76	*		
77			
78	⚠		
79			
80			
81			
82			

KV-25DXR
RM-727/APM-X3U

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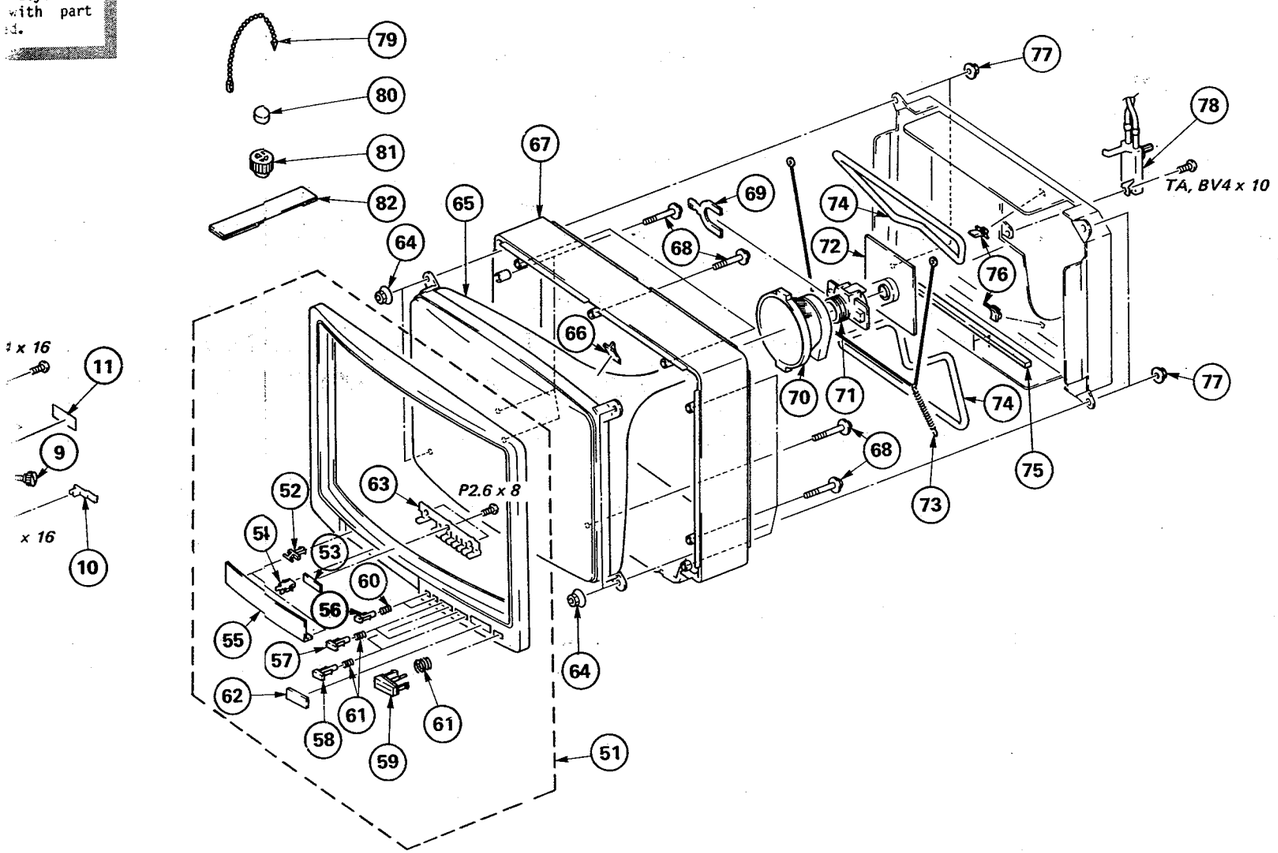
5-2. CRT

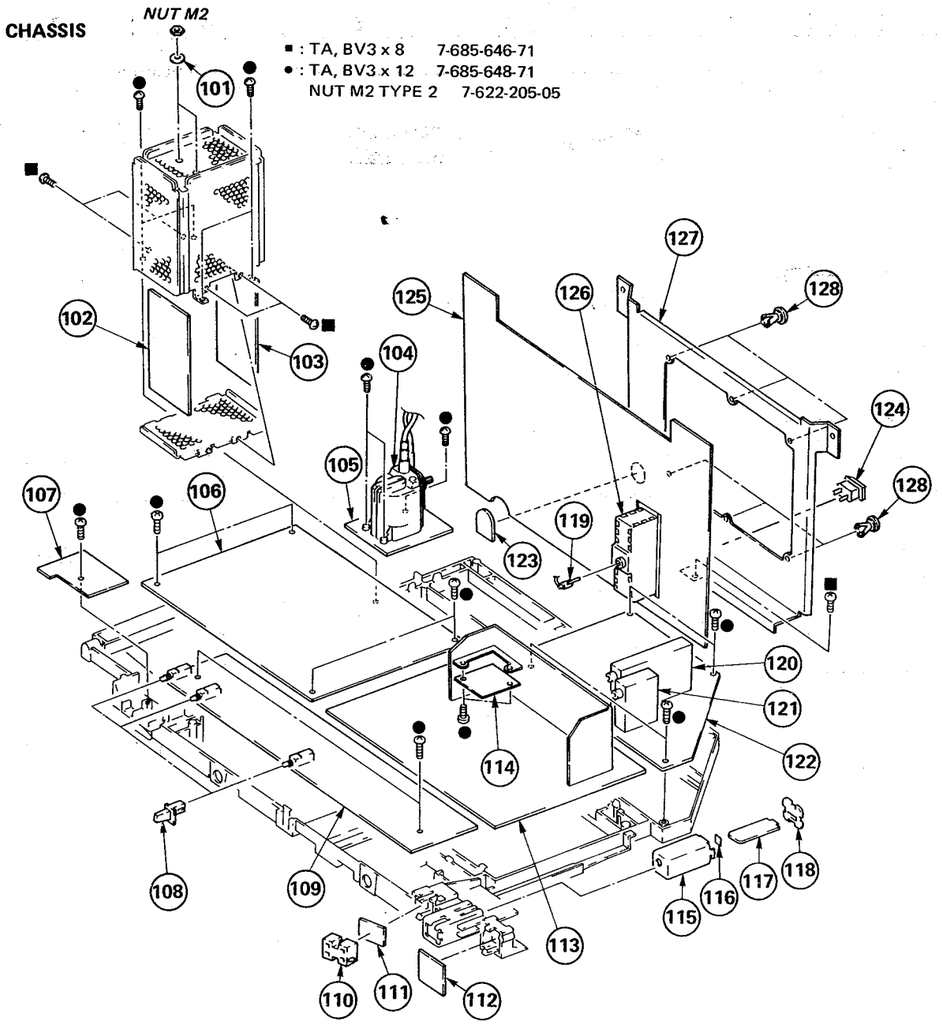
TA, BV4 x 10 7-685-660-01
P2.6 x 8 7-685-134-14



No.	Part No.	Description	Remark
51	X-4374-133-1	BEZEL ASSY	52-63
52	3-662-365-00	SHAFT (S), DOOR	
53	4-374-115-01	EMBLEM, SONY	
54	4-352-034-00	CATCHER, PUSH	
55	X-4374-132-1	DOOR ASSY, CONTROL	
56	X-4374-101-1	BUTTON (A) ASSY	
57	X-4374-102-1	BUTTON (B) ASSY	
58	X-4374-103-1	BUTTON (C) ASSY	
59	X-4374-301-1	BUTTON ASSY, POWER	
60	3-571-847-00	SPRING, COMPRESSION	
61	3-561-888-02	SPRING, COMPRESSION	
62	*4-374-135-21	PLATE, TRANSPARENT	9,10
63	4-374-126-11	BUTTON (D), MULTI	
64	4-330-305-00	NUT, SPECIAL	
65	⚠8-736-652-05	CRT (A64JKJ10X)	
66	3-703-003-00	SPACER, DY	
67	X-4374-134-1	CABINET ASSY	68
68	4-319-520-00	SCREW, SPECIAL (+PW4X30)	
69	1-452-146-21	MAGNET, BMC	
70	⚠1-451-255-11	DEFLECTION YOKE (SY-164)	
71	⚠1-452-351-11	NECK ASSY, CRT (NA302)	
72	*A-1330-618-A	C BOARD, COMPLETE	
73	4-303-774-XX	SPRING	
74	⚠1-426-059-21	COIL, DEGAUSSING	
75	4-310-778-00	CUSHION (A), CRT	
76	*4-371-629-01	STOPPER, WIRE	
77	4-306-034-00	FLANGE NUT, (B) 5MM	
78	⚠1-230-212-11	RESISTOR ASSY, HIGH-VOLTAGE	
79	4-308-870-00	CLIP, LED WIRE	
80	1-452-032-00	MAGNET, DISK; 10MM Ø	
81	1-452-094-00	MAGNET, ROTATABLE DISK; 15MM Ø	
82	X-4306-312-0	PERMALLOY ASSY, CONVERGENCE	

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

5-3. CHASSIS



No.	Part No.	Description	Remark
101	3-845-490-00	WASHER	
102	*1-615-481-11	GA BOARD	
103	*1-615-482-11	GB BOARD	
104	⚠1-439-339-12	TRANSFORMER ASSY, FLYBACK	
105	*1-613-414-11	P BOARD	
106	*A-1245-276-A	F BOARD, COMPLETE	
107	*1-615-484-11	Z BOARD	
108	4-374-114-01	BUTTON (D), SWITCH	
109	*1-613-982-11	M BOARD	
110	*4-374-112-01	CAP, LED	
111	*1-613-983-11	T1 BOARD	
112	*1-614-358-11	T2 BOARD	
113	*A-1386-022-A	X BOARD, COMPLETE	
114	*1-614-651-11	XA BOARD	
115	*4-342-117-00	CASE, SHIELD (MAIN), R	
116	*4-333-624-00	FILM (N), SPECIAL	
117	*1-611-717-11	N BOARD	
118	*4-342-118-00	LID, SHIELD CASE, R	
119	*1-557-261-11	CABLE, P-P	
120	⚠1-463-470-00	TUNER, ET (BT-896)	
121	⚠1-463-471-31	SYNTHESIZER UNIT, FREQUENCY (PPU-1A)	
122	*A-1296-002-A	A BOARD, COMPLETE	
123	*1-614-359-11	T4 BOARD	
124	⚠1-561-347-11	OUTLET, AC	
125	*A-1381-040-A	U BOARD, COMPLETE	
126	⚠1-417-125-11	SELECTOR, ANTENNA	
127	*4-374-468-01	HOLDER, TERMINAL BOARD	
128	4-374-303-01	RIVET, NYLON	

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

SECTION 6
ELECTRICAL PARTS LIST

NOTE:

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

When indicating parts by reference number, please include the board name.

• Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

• All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

CAPACITORS
• MF : μF, PF : μμF

RESISTORS
• All resistors are in ohms
• F : nonflammable

COILS
• MMH : mH, UH : μH

Ref.No.	Part No.	Description			Remark
	*A-1135-313-A	B BOARD, COMPLETE			
		**********			
		CONNECTOR			
B1	*1-564-440-11	PLUG, CONNECTOR (2.5MM) 4P			
B2	*1-564-447-31	PLUG, CONNECTOR (2.5MM) 11P			
B3	*1-564-354-00	PLUG, CONNECTOR (2.5MM) 3P			
B4	*1-564-441-11	PLUG, CONNECTOR (2.5MM) 5P			
B5	*1-564-440-11	PLUG, CONNECTOR (2.5MM) 4P			
B6	*1-564-446-11	PLUG, CONNECTOR (2.5MM) 10P			
B7	*1-564-354-00	PLUG, CONNECTOR (2.5MM) 3P			
B8	*1-508-767-00	5P PLUG			
B9	*1-560-224-00	PLUG, CONNECTOR (2.5MM) 10P			
B10	*1-564-443-11	PLUG, CONNECTOR (2.5MM) 7P			
B11	*1-564-444-11	PLUG, CONNECTOR (2.5MM) 8P			
B12	*1-564-440-11	PLUG, CONNECTOR (2.5MM) 4P			
B13	*1-564-443-11	PLUG, CONNECTOR (2.5MM) 7P			
B15	*1-564-354-21	PLUG, CONNECTOR (2.5MM) 3P			
B16	*1-564-445-31	PLUG, CONNECTOR (2.5MM) 9P			
B17	*1-564-354-00	PLUG, CONNECTOR (2.5MM) 3P			
		CAPACITOR			
C310	1-102-973-00	CERAMIC	100PF	5%	50V
C335	1-101-006-00	CERAMIC	0.047MF		50V
C336	1-123-324-00	ELECT	1000MF	20%	16V
C337	1-123-356-00	ELECT	10MF	20%	16V
C338	1-123-356-00	ELECT	10MF	20%	16V
C339	1-123-356-00	ELECT	10MF	20%	16V
C340	1-123-379-00	ELECT	0.47MF	20%	50V
C341	1-123-379-00	ELECT	0.47MF	20%	50V
C342	1-123-379-00	ELECT	0.47MF	20%	50V
C343	1-123-356-00	ELECT	10MF	20%	16V
C344	1-123-356-00	ELECT	10MF	20%	16V
C345	1-101-006-00	CERAMIC	0.047MF		50V
C346	1-124-645-11	ELECT	10MF	20%	16V
C347	1-123-380-00	ELECT	1MF	20%	50V
C348	1-123-380-00	ELECT	1MF	20%	50V
C350	1-123-380-00	ELECT	1MF	20%	50V
C351	1-123-332-00	ELECT	47MF	20%	16V
C352	1-123-332-00	ELECT	47MF	20%	16V
C353	1-123-332-00	ELECT	47MF	20%	16V
C360	1-102-973-00	CERAMIC	100PF	5%	50V
C364	1-123-332-00	ELECT	47MF	20%	16V
C366	1-102-965-00	CERAMIC	39PF	5%	50V
C373	1-101-006-00	CERAMIC	0.047MF		50V
C376	1-102-949-00	CERAMIC	12PF	5%	50V
C377	1-102-949-00	CERAMIC	12PF	5%	50V
C378	1-102-949-00	CERAMIC	12PF	5%	50V
C379	1-102-936-00	CERAMIC	3PF	0.5PF	50V
C383	1-123-381-00	ELECT	2.2MF	20%	50V
C2006	1-102-976-00	CERAMIC	180PF	5%	50V
C2007	1-102-976-00	CERAMIC	180PF	5%	50V
C2008	1-101-884-00	CERAMIC	56PF	5%	50V
C2009	1-101-880-00	CERAMIC	47PF	5%	50V
C2010	1-102-976-00	CERAMIC	180PF	5%	50V
C2011	1-102-976-00	CERAMIC	180PF	5%	50V
C2013	1-161-271-00	CERAMIC	100PF	5%	50V
C2014	1-106-196-00	MYLAR	0.01MF	10%	100V
C2015	1-102-942-00	CERAMIC	5PF	0.5PF	50V
C2016	1-123-307-00	ELECT	100MF	20%	6.3V
C2017	1-123-369-00	ELECT	4.7MF	20%	25V
C2018	1-123-369-00	ELECT	4.7MF	20%	25V
C2019	1-123-369-00	ELECT	4.7MF	20%	25V
C2020	1-123-369-00	ELECT	4.7MF	20%	25V
C2021	1-123-306-00	ELECT	47MF	20%	6.3V
C2022	1-101-006-00	CERAMIC	0.047MF		50V
C2023	1-123-321-00	ELECT	220MF	20%	16V
C2024	1-101-004-00	CERAMIC	0.01MF		50V
C2025	1-101-004-00	CERAMIC	0.01MF		50V
C2026	1-123-318-00	ELECT	33MF	20%	16V
C2027	1-102-125-00	CERAMIC	0.0047MF	10%	50V
C2029	1-101-004-00	CERAMIC	0.01MF		50V
C2030	1-123-321-00	ELECT	220MF	20%	16V
C2031	1-123-323-00	ELECT	470MF	20%	16V
C2032	1-123-333-00	ELECT	100MF	20%	16V
C2034	1-101-006-00	CERAMIC	0.047MF		50V
C2035	1-102-125-00	CERAMIC	0.0047MF	10%	50V
C2036	1-101-004-00	CERAMIC	0.01MF		50V
C2038	1-101-006-00	CERAMIC	0.047MF		50V
C2039	1-102-518-00	CERAMIC	33PF	5%	50V
C2041	1-106-196-00	MYLAR	0.01MF	10%	100V
C2044	1-123-321-00	ELECT	220MF	20%	16V
C2045	1-102-125-00	CERAMIC	0.0047MF	10%	50V
C2046	1-102-125-00	CERAMIC	0.0047MF	10%	50V
C2047	1-102-125-00	CERAMIC	0.0047MF	10%	50V
C2048	1-102-125-00	CERAMIC	0.0047MF	10%	50V
C2049	1-102-978-00	CERAMIC	220PF	5%	50V
C2052	1-102-978-00	CERAMIC	220PF	5%	50V
C2053	1-101-003-00	CERAMIC	0.0047MF		50V
C2054	1-101-006-00	CERAMIC	0.047MF		50V
C2055	1-123-380-00	ELECT	1MF	20%	50V
C2056	1-102-978-00	CERAMIC	220PF	5%	50V
C2057	1-101-004-00	CERAMIC	0.01MF		50V
C2058	1-123-586-00	ELECT	0.1MF	20%	50V
C2059	1-123-380-00	ELECT	1MF	20%	50V
C2060	1-123-447-00	ELECT	0.22MF	20%	50V
C2061	1-123-447-00	ELECT	0.22MF	20%	50V
C2062	1-101-004-00	CERAMIC	0.01MF		50V
C2063	1-101-003-00	CERAMIC	0.0047MF		50V
C2063	1-123-356-00	ELECT	10MF	20%	50V
C2064	1-101-004-00	CERAMIC	0.01MF		50V
C2065	1-101-004-00	CERAMIC	0.01MF		50V
C2066	1-101-004-00	CERAMIC	0.01MF		50V
C2067	1-101-004-00	CERAMIC	0.01MF		50V
C2068	1-101-004-00	CERAMIC	0.01MF		50V

Ref.No.	Part No.	Description			Remark
C2069	1-101-004-00	CERAMIC	0.01MF		50V
C2070	1-123-330-00	ELECT	22MF	20%	16V
C2071	1-123-330-00	ELECT	22MF	20%	16V
C2072	1-123-380-00	ELECT	1MF	20%	50V
		DIODE			
D309	8-719-102-78	DIODE RD6.8E-N2			
D328	8-719-102-84	DIODE RD8.2E-N2			
D329	8-719-911-19	DIODE 1SS119			
D364	8-719-911-19	DIODE 1SS119			
D381	8-719-911-19	DIODE 1SS119			
D401	8-719-911-19	DIODE 1SS119			
D402	8-719-102-58	DIODE RD3.6E-N2			
D2001	8-719-102-62	DIODE RD4.3E-N2			
D2002	8-719-102-70	DIODE RD5.6E-N1			
D2007	8-719-200-02	DIODE 10E2			
D2010	8-719-102-72	DIODE RD5.6E-N3			
D2030	8-719-911-19	DIODE 1SS119			
D2031	8-719-911-19	DIODE 1SS119			
D2033	8-719-911-19	DIODE 1SS119			
D2034	8-719-911-19	DIODE 1SS119			
D2036	8-719-102-74	DIODE RD6.2E-N2			
D2037	8-719-911-19	DIODE 1SS119			
D2039	8-719-911-19	DIODE 1SS119			
D2040	8-719-911-19	DIODE 1SS119			
D2041	8-719-911-19	DIODE 1SS119			
D2042	8-719-911-19	DIODE 1SS119			
D2043	8-719-911-19	DIODE 1SS119			
D2044	8-719-911-19	DIODE 1SS119			
D2046	8-719-101-04	DIODE RD33E-B2			
D2047	8-719-911-19	DIODE 1SS119			
D2050	8-719-102-73	DIODE RD6.2E-N1			
D2051	8-719-102-73	DIODE RD6.2E-N1			
D2052	8-719-102-73	DIODE RD6.2E-N1			
D2053	8-719-102-70	DIODE RD5.6E-N1			
D2055	8-719-102-70	DIODE RD5.6E-N1			
D2056	8-719-102-60	DIODE RD3.9E-N1			
D2057	8-719-911-19	DIODE 1SS119			
D2058	8-719-101-65	DIODE RD6.8E-L3			
		IC			
IC306	8-752-010-00	IC CX20100			
IC2001	8-752-320-11	IC CXK1001P			
IC2002	8-759-912-82	IC CX530-507N			
IC2003	8-759-240-23	IC TC4023BP			
IC2004	8-759-000-16	IC MC14562BCP			
IC2005	8-759-914-46	IC CCUSONY-02			
IC2006	8-759-910-16	IC MDA2061			
IC2007	8-759-909-50	IC CX7958			
IC2008	8-759-913-58	IC MEA2050			
IC2009	8-759-908-35	IC TL7705CP-B			

Ref.No.	Part No.	Description	Remark
		COIL	
L304	1-407-689-00	MICRO INDUCTOR 4.7UH	
L305	1-408-698-00	MICRO INDUCTOR 8.2UH	
L2005	1-404-538-11	COIL	
L2006	1-407-717-00	MICRO INDUCTOR 1MMH	
L2007	1-407-689-00	MICRO INDUCTOR 4.7UH	
L2008	1-407-689-00	MICRO INDUCTOR 4.7UH	
L2009	1-407-689-00	MICRO INDUCTOR 4.7UH	
L2010	1-407-689-00	MICRO INDUCTOR 4.7UH	
		TRANSISTOR	
Q301	8-729-245-83	TRANSISTOR 2SC2458	
Q302	8-729-245-83	TRANSISTOR 2SC2458	
Q306	8-729-900-89	TRANSISTOR DTC144ES	
Q307	8-729-245-83	TRANSISTOR 2SC2458	
Q312	8-729-204-83	TRANSISTOR 2SA1048GR	
Q317	8-729-245-83	TRANSISTOR 2SC2458	
Q318	8-729-204-83	TRANSISTOR 2SA1048GR	
Q319	8-729-245-83	TRANSISTOR 2SC2458	
Q320	8-729-245-83	TRANSISTOR 2SC2458	
Q321	8-729-245-83	TRANSISTOR 2SC2458	
Q322	8-729-245-83	TRANSISTOR 2SC2458	
Q323	8-729-245-83	TRANSISTOR 2SC2458	
Q324	8-729-245-83	TRANSISTOR 2SC2458	
Q325	8-729-245-83	TRANSISTOR 2SC2458	
Q328	8-729-245-83	TRANSISTOR 2SC2458	
Q329	8-729-245-83	TRANSISTOR 2SC2458	
Q330	8-729-245-83	TRANSISTOR 2SC2458	
Q332	8-729-204-83	TRANSISTOR 2SA1048GR	
Q333	8-729-204-83	TRANSISTOR 2SA1048GR	
Q334	8-729-204-83	TRANSISTOR 2SA1048GR	
Q361	8-729-245-83	TRANSISTOR 2SC2458	
Q2005	8-729-900-89	TRANSISTOR DTC144ES	
Q2006	8-729-245-83	TRANSISTOR 2SC2458	
Q2007	8-729-204-83	TRANSISTOR 2SA1048GR	
Q2011	8-729-245-83	TRANSISTOR 2SC2458	
Q2012	8-729-245-83	TRANSISTOR 2SC2458	
Q2016	8-729-900-89	TRANSISTOR DTC144ES	
Q2017	8-729-204-83	TRANSISTOR 2SA1048GR	
Q2018	8-729-245-83	TRANSISTOR 2SC2458	
Q2021	8-729-900-89	TRANSISTOR DTC144ES	
Q2022	8-729-245-83	TRANSISTOR 2SC2458	
Q2023	8-729-245-83	TRANSISTOR 2SC2458	
Q2024	8-729-245-83	TRANSISTOR 2SC2458	
Q2026	8-729-900-89	TRANSISTOR DTC144ES	
Q2028	8-729-900-89	TRANSISTOR DTC144ES	
Q2029	8-729-204-83	TRANSISTOR 2SA1048GR	
Q2030	8-729-204-83	TRANSISTOR 2SA1048GR	
Q2031	8-729-245-83	TRANSISTOR 2SC2458	
		RESISTOR	
JW1	1-217-587-00	SHORT 0.01	
JW2	1-217-587-00	SHORT 0.01	

Ref.No.	Part No.	Description				Remark
R301	1-247-725-11	CARBON	10K	5%	1/4W	
R313	1-247-807-00	CARBON	100	5%	1/6W	
R314	1-247-700-11	CARBON	100	5%	1/4W	
R322	1-247-831-00	CARBON	1K	5%	1/6W	
R323	1-247-831-00	CARBON	1K	5%	1/6W	
R332	1-247-843-00	CARBON	3.3K	5%	1/6W	
R334	1-247-849-00	CARBON	5.6K	5%	1/6W	
R337	1-247-807-00	CARBON	100	5%	1/6W	
R338	1-247-807-00	CARBON	100	5%	1/6W	
R339	1-247-807-00	CARBON	100	5%	1/6W	
R353	1-247-125-00	CARBON	560	5%	1/4W	
R355	1-247-725-11	CARBON	10K	5%	1/4W	
R358	1-247-847-00	CARBON	4.7K	5%	1/6W	
R360	1-247-819-00	CARBON	330	5%	1/6W	
R361	1-247-819-00	CARBON	330	5%	1/6W	
R362	1-247-843-00	CARBON	3.3K	5%	1/6W	
R363	1-247-835-00	CARBON	1.5K	5%	1/6W	
R374	1-249-421-11	CARBON	2.2K	5%	1/6W	
R375	1-249-421-11	CARBON	2.2K	5%	1/6W	
R376	1-249-421-11	CARBON	2.2K	5%	1/6W	
R377	1-247-167-00	CARBON	33K	5%	1/4W	
R383	1-247-831-00	CARBON	1K	5%	1/6W	
R385	1-247-843-00	CARBON	3.3K	5%	1/6W	
R386	1-247-837-00	CARBON	1.8K	5%	1/6W	
R387	1-247-831-00	CARBON	1K	5%	1/6W	
R388	1-247-855-00	CARBON	10K	5%	1/6W	
R389	1-247-829-00	CARBON	820	5%	1/6W	
R398	1-247-833-00	CARBON	1.2K	5%	1/6W	
R400	1-247-879-00	CARBON	100K	5%	1/6W	
R401	1-247-827-00	CARBON	680	5%	1/6W	
R407	1-247-849-00	CARBON	5.6K	5%	1/6W	
R408	1-247-119-00	CARBON	330	5%	1/4W	
R409	1-247-825-00	CARBON	560	5%	1/6W	
R410	1-247-825-00	CARBON	560	5%	1/6W	
R411	1-247-119-00	CARBON	330	5%	1/4W	
R419	1-247-863-00	CARBON	22K	5%	1/6W	
R420	1-247-831-00	CARBON	1K	5%	1/6W	
R423	1-247-179-00	CARBON	100K	5%	1/4W	
R424	1-247-859-00	CARBON	15K	5%	1/6W	
R425	1-249-421-11	CARBON	2.2K	5%	1/6W	
R428	1-247-819-00	CARBON	330	5%	1/6W	
R429	1-247-831-00	CARBON	1K	5%	1/6W	
R436	1-247-145-00	CARBON	3.9K	5%	1/4W	
R437	1-247-835-00	CARBON	1.5K	5%	1/6W	
R439	1-249-421-11	CARBON	2.2K	5%	1/6W	
R440	1-247-831-00	CARBON	1K	5%	1/6W	
R441	1-247-831-00	CARBON	1K	5%	1/6W	
R443	1-249-421-11	CARBON	2.2K	5%	1/6W	
R446	1-247-823-00	CARBON	470	5%	1/6W	
R447	1-247-143-00	CARBON	3.3K	5%	1/4W	
R448	1-247-843-00	CARBON	3.3K	5%	1/6W	
R449	1-247-843-00	CARBON	3.3K	5%	1/6W	
R450	1-247-803-00	CARBON	68	5%	1/6W	
R451	1-247-803-00	CARBON	68	5%	1/6W	
R452	1-247-803-00	CARBON	68	5%	1/6W	
R454	1-247-871-00	CARBON	47K	5%	1/6W	
R461	1-247-831-00	CARBON	1K	5%	1/6W	
R462	1-247-713-11	CARBON	1K	5%	1/4W	
R464	1-247-717-11	CARBON	2.2K	5%	1/4W	
R467	1-247-863-00	CARBON	22K	5%	1/6W	
R468	1-247-859-00	CARBON	15K	5%	1/6W	
R469	1-247-725-11	CARBON	10K	5%	1/4W	
R470	1-246-533-00	CARBON	330K	5%	1/4W	
R2011	1-249-421-11	CARBON	2.2K	5%	1/6W	
R2012	1-249-421-11	CARBON	2.2K	5%	1/6W	
R2013	1-247-855-00	CARBON	10K	5%	1/6W	
R2019	1-247-831-00	CARBON	1K	5%	1/6W	
R2020	1-247-831-00	CARBON	1K	5%	1/6W	
R2021	1-249-421-11	CARBON	2.2K	5%	1/6W	
R2022	1-249-421-11	CARBON	2.2K	5%	1/6W	
R2023	1-247-119-00	CARBON	330	5%	1/4W	
R2024	1-247-713-11	CARBON	1K	5%	1/4W	
R2025	1-247-713-11	CARBON	1K	5%	1/4W	
R2026	1-247-819-00	CARBON	330	5%	1/6W	
R2030	1-249-421-11	CARBON	2.2K	5%	1/6W	
R2035	1-247-119-00	CARBON	330	5%	1/4W	
R2036	1-247-119-00	CARBON	330	5%	1/4W	
R2037	1-247-119-00	CARBON	330	5%	1/4W	
R2038	1-247-119-00	CARBON	330	5%	1/4W	
R2039	1-247-119-00	CARBON	330	5%	1/4W	
R2040	1-247-119-00	CARBON	330	5%	1/4W	
R2048	1-247-819-00	CARBON	330	5%	1/6W	
R2050	1-247-819-00	CARBON	330	5%	1/6W	
R2051	1-247-819-00	CARBON	330	5%	1/6W	
R2055	1-247-717-11	CARBON	2.2K	5%	1/4W	
R2056	1-247-717-11	CARBON	2.2K	5%	1/4W	
R2057	1-247-717-11	CARBON	2.2K	5%	1/4W	
R2063	1-244-877-00	CARBON	1.5K	5%	1/2W	
R2064	1-247-847-00	CARBON	4.7K	5%	1/6W	
R2065	1-247-847-00	CARBON	4.7K	5%	1/6W	
R2066	1-247-847-00	CARBON	4.7K	5%	1/6W	
R2067	1-247-847-00	CARBON	4.7K	5%	1/6W	
R2072	1-247-843-00	CARBON	3.3K	5%	1/6W	
R2073	1-247-843-00	CARBON	3.3K	5%	1/6W	
R2074	1-247-717-11	CARBON	2.2K	5%	1/4W	
R2075	1-247-883-00	CARBON	150K	5%	1/6W	
R2076	1-247-831-00	CARBON	1K	5%	1/6W	
R2078	1-247-819-00	CARBON	330	5%	1/6W	
R2079	1-247-819-00	CARBON	330	5%	1/6W	
R2083	1-247-159-00	CARBON	15K	5%	1/4W	
R2084	1-247-147-00	CARBON	4.7K	5%	1/4W	
R2085	1-247-147-00	CARBON	4.7K	5%	1/4W	
R2086	1-247-708-11	CARBON	470	5%	1/4W	
R2087	1-247-713-11	CARBON	1K	5%	1/4W	
R2088	1-247-823-00	CARBON	470	5%	1/6W	
R2091	1-247-831-00	CARBON	1K	5%	1/6W	

Ref.No.	Part No.	Description				Remark
R2092	1-247-143-00	CARBON	3.3K	5%	1/4W	
R2093	1-247-783-00	CARBON	10	5%	1/6W	
R2094	1-247-688-11	CARBON	10	5%	1/4W	
R2095	1-247-688-11	CARBON	10	5%	1/4W	
R2096	1-247-823-00	CARBON	470	5%	1/6W	
R2098	1-247-823-00	CARBON	470	5%	1/6W	
R2099	1-247-815-00	CARBON	220	5%	1/6W	
R2102	1-247-871-00	CARBON	47K	5%	1/6W	
R2103	1-247-847-00	CARBON	4.7K	5%	1/6W	
R2104	1-247-827-00	CARBON	680	5%	1/6W	
R2107	1-247-819-00	CARBON	330	5%	1/6W	
R2109	1-247-717-11	CARBON	2.2K	5%	1/4W	
R2117	1-247-847-00	CARBON	4.7K	5%	1/6W	
R2119	1-247-855-00	CARBON	10K	5%	1/6W	
R2120	1-247-855-00	CARBON	10K	5%	1/6W	
R2122	1-249-421-11	CARBON	2.2K	5%	1/6W	
R2123	1-249-421-11	CARBON	2.2K	5%	1/6W	
R2124	1-247-119-00	CARBON	330	5%	1/4W	
R2131	1-247-863-00	CARBON	22K	5%	1/6W	
R2132	1-247-831-00	CARBON	1K	5%	1/6W	
R2133	1-247-847-00	CARBON	4.7K	5%	1/6W	
R2134	1-247-117-00	CARBON	270	5%	1/4W	
R2135	1-247-819-00	CARBON	330	5%	1/6W	
R2139	1-247-163-00	CARBON	22K	5%	1/4W	
R2140	1-247-847-00	CARBON	4.7K	5%	1/6W	
R2141	1-247-171-00	CARBON	47K	5%	1/4W	
R2142	1-247-871-00	CARBON	47K	5%	1/6W	
R2143	1-247-871-00	CARBON	47K	5%	1/6W	
R2144	1-247-871-00	CARBON	47K	5%	1/6W	
R2145	1-246-529-00	CARBON	220K	5%	1/4W	
R2146	1-247-855-00	CARBON	10K	5%	1/6W	
R2149	1-247-823-00	CARBON	470	5%	1/6W	
R2150	1-247-831-00	CARBON	1K	5%	1/6W	
R2151	1-247-863-00	CARBON	22K	5%	1/6W	
R2153	1-247-819-00	CARBON	330	5%	1/6W	
R2187	1-247-717-11	CARBON	2.2K	5%	1/4W	
R2189	1-247-717-11	CARBON	2.2K	5%	1/4W	
R2190	1-247-859-00	CARBON	15K	5%	1/6W	
R2191	1-247-117-00	CARBON	270	5%	1/4W	
R2192	1-247-819-00	CARBON	330	5%	1/6W	
R2193	1-247-859-00	CARBON	15K	5%	1/6W	
R2194	1-247-831-00	CARBON	1K	5%	1/6W	
R2195	1-247-831-00	CARBON	1K	5%	1/6W	
R2198	1-247-831-00	CARBON	1K	5%	1/6W	
R2199	1-247-811-00	CARBON	150	5%	1/6W	
R2200	1-247-843-00	CARBON	3.3K	5%	1/6W	
R2202	1-247-879-00	CARBON	100K	5%	1/6W	

VARIABLE RESISTOR

RV303	1-228-724-00	RES, ADJ, CERAMIC CARBON	10K
RV304	1-228-724-00	RES, ADJ, CERAMIC CARBON	10K
RV305	1-228-724-00	RES, ADJ, CERAMIC CARBON	10K

Ref.No.	Part No.	Description			Remark
		SWITCH			
S2001	1-553-119-00	SWITCH, SLIDE			
		THERMISTOR			
TH301	1-800-627-00	THERMISTOR			
		CRYSTAL			
X2001	1-567-254-11	OSCILLATOR, CERAMIC			
X2002	1-527-726-00	VIBRATOR, CRYSTAL			
**********					
	A-1499-404-A	BD SHIELD ASSY			
		**********			
		CAPACITOR			
C301	1-106-208-00	MYLAR	0.033MF	10%	100V
C302	1-106-220-00	MYLAR	0.1MF	10%	100V
C303	1-101-880-00	CERAMIC	47PF	5%	50V
C304	1-123-356-00	ELECT	10MF	20%	16V
C305	1-101-006-21	CERAMIC	0.047MF		50V
C309	1-123-333-00	ELECT	100MF	20%	16V
C312	1-161-998-11	FEED-THROUGH	100PF	20%	50V
C313	1-161-998-11	FEED-THROUGH	100PF	20%	50V
C314	1-161-998-11	FEED-THROUGH	100PF	20%	50V
C315	1-161-997-11	FEED-THROUGH	39PF	10%	50V
C316	1-161-997-11	FEED-THROUGH	39PF	10%	50V
C317	1-161-997-11	FEED-THROUGH	39PF	10%	50V
C318	1-162-572-11	FEED-THROUGH	0.001MF		50V
C319	1-162-572-11	FEED-THROUGH	0.001MF		50V
C321	1-102-807-00	CERAMIC	5PF	1PF	50V
C322	1-101-006-21	CERAMIC	0.047MF		50V
C323	1-123-356-00	ELECT	10MF	20%	16V
C325	1-102-716-00	CERAMIC	12PF	5%	50V
C326	1-101-006-21	CERAMIC	0.047MF		50V
C327	1-161-998-11	FEED-THROUGH	100PF	20%	50V
C328	1-161-997-11	FEED-THROUGH	39PF	10%	50V
C329	1-161-998-11	FEED-THROUGH	100PF	20%	50V
C330	1-161-997-11	FEED-THROUGH	39PF	10%	50V
C331	1-162-572-11	FEED-THROUGH	0.001MF		50V
C332	1-161-998-11	FEED-THROUGH	100PF	20%	50V
C349	1-123-332-00	ELECT	47MF	20%	16V
C372	1-123-330-00	ELECT	22MF	20%	16V
C374	1-101-006-21	CERAMIC	0.047MF		50V
C375	1-101-006-21	CERAMIC	0.047MF		50V
C379	1-123-332-00	ELECT	47MF	20%	16V
C380	1-101-006-21	CERAMIC	0.047MF		50V
C382	1-102-976-00	CERAMIC	180PF	5%	50V
C384	1-161-999-11	FEED-THROUGH	0.002MF		50V
C385	1-161-999-11	FEED-THROUGH	0.002MF		50V
C386	1-161-996-11	FEED-THROUGH	22PF	10%	50V
C387	1-162-572-11	FEED-THROUGH	0.001MF		50V
C388	1-161-997-11	FEED-THROUGH	39PF	10%	50V

Ref.No.	Part No.	Description			Remark
C389	1-161-997-11	FEED-THROUGH 39PF	10%	50V	
C391	1-161-996-11	FEED-THROUGH 22PF	10%	50V	
C392	1-162-584-00	FEED-THROUGH 2PF	10%	50V	
C393	1-162-584-00	FEED-THROUGH 2PF	10%	50V	
C394	1-162-584-00	FEED-THROUGH 2PF	10%	50V	
C395	1-161-996-11	FEED-THROUGH 22PF	10%	50V	
C396	1-161-996-11	FEED-THROUGH 22PF	10%	50V	
C397	1-161-996-11	FEED-THROUGH 22PF	10%	50V	
C398	1-161-998-11	FEED-THROUGH 100PF	20%	50V	
C399	1-162-572-11	FEED-THROUGH 0.001MF		50V	
C2052	1-123-356-00	ELECT 10MF	20%	16V	
		DIODE			
D301	8-719-911-19	DIODE 1SS119			
D303	8-719-911-19	DIODE 1SS119			
D304	8-719-116-07	DIODE RD16E-B			
D321	8-719-911-19	DIODE 1SS119			
D327	8-719-911-19	DIODE 1SS119			
		IC			
IC301	8-759-910-13	IC DPU2500			
IC302	8-759-910-12	IC CVPU2210			
IC304	8-759-921-05	IC VCU2100F			
IC305	8-759-910-14	IC MCU2600			
		COIL			
L302	1-407-689-00	MICRO INDUCTOR 4.7UH			
L303	1-407-689-00	MICRO INDUCTOR 4.7UH			
L310	1-408-564-00	MICRO INDUCTOR 12UH			
L312	1-408-557-00	MICRO INDUCTOR 3.3UH			
L313	1-408-557-00	MICRO INDUCTOR 3.3UH			
L314	1-408-557-00	MICRO INDUCTOR 3.3UH			
L315	1-408-557-00	MICRO INDUCTOR 3.3UH			
L316	1-408-557-00	MICRO INDUCTOR 3.3UH			
L317	1-408-557-00	MICRO INDUCTOR 3.3UH			
L318	1-408-557-00	MICRO INDUCTOR 3.3UH			
L319	1-408-557-00	MICRO INDUCTOR 3.3UH			
L328	1-408-557-00	MICRO INDUCTOR 3.3UH			
L329	1-408-557-00	MICRO INDUCTOR 3.3UH			
L330	1-408-557-00	MICRO INDUCTOR 3.3UH			
L331	1-408-557-00	MICRO INDUCTOR 3.3UH			
L332	1-408-557-00	MICRO INDUCTOR 3.3UH			
L384	1-408-225-00	MICRO INDUCTOR 3.3UH			
L385	1-408-557-00	MICRO INDUCTOR 3.3UH			
L387	1-408-557-00	MICRO INDUCTOR 3.3UH			
L391	1-408-557-00	MICRO INDUCTOR 3.3UH			
L392	1-408-557-00	MICRO INDUCTOR 3.3UH			
L393	1-408-557-00	MICRO INDUCTOR 3.3UH			
L394	1-408-557-00	MICRO INDUCTOR 3.3UH			
L395	1-408-557-00	MICRO INDUCTOR 3.3UH			
L396	1-408-557-00	MICRO INDUCTOR 3.3UH			
L397	1-408-557-00	MICRO INDUCTOR 3.3UH			
L398	1-408-557-00	MICRO INDUCTOR 3.3UH			
L399	1-408-557-00	MICRO INDUCTOR 3.3UH			

Ref.No.	Part No.	Description				Remark
		TRANSISTOR				
Q305	8-729-245-83	TRANSISTOR 2SC2458				
Q331	8-729-245-83	TRANSISTOR 2SC2458				
		RESISTOR				
R301	1-247-847-00	CARBON	4.7K	5%	1/6W	
R302	1-247-823-00	CARBON	470	5%	1/6W	
R303	1-247-859-00	CARBON	15K	5%	1/6W	
R304	1-247-857-00	CARBON	12K	5%	1/6W	
R305	1-247-807-00	CARBON	100	5%	1/6W	
R306	1-247-831-00	CARBON	1K	5%	1/6W	
R308	1-247-851-00	CARBON	6.8K	5%	1/6W	
R310	1-249-421-11	CARBON	2.2K	5%	1/6W	
R311	1-249-421-11	CARBON	2.2K	5%	1/6W	
R312	1-249-421-11	CARBON	2.2K	5%	1/6W	
R324	1-247-819-00	CARBON	330	5%	1/6W	
R340	1-247-869-00	CARBON	39K	5%	1/6W	
R341	1-247-819-00	CARBON	330	5%	1/6W	
R349	1-247-811-00	CARBON	150	5%	1/6W	
R350	1-247-811-00	CARBON	150	5%	1/6W	
R351	1-247-811-00	CARBON	150	5%	1/6W	
R352	1-247-863-00	CARBON	22K	5%	1/6W	
R418	1-247-855-00	CARBON	10K	5%	1/6W	
R2121	1-247-863-00	CARBON	22K	5%	1/6W	
		CRYSTAL				
X301	1-527-722-00	OSCILLATOR, CRYSTAL				
		**********				
	*1-613-983-11	T1 BOARD				
		********				
	*4-345-701-00	HOLDER, LED				
		DIODE				
D1350	8-719-114-34	DIODE SY432D				
D1351	8-719-114-34	DIODE SY432D				
D1352	8-719-106-34	DIODE SR632D				
D1353	8-719-106-34	DIODE SR632D				
		**********				
	*1-614-358-11	T2 BOARD				
		********				
		SWITCH				
S1325⚠	1-554-303-11	SWITCH, KEY BOARD				
		**********				
	*1-614-359-11	T4 BOARD				
		********				

NOTE:

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

P FB F

Ref.No.	Part No.	Description			Remark
	*1-613-414-11	P BOARD			
		*******			
		CAPACITOR			
C901	1-108-431-00	MYLAR	0.068MF	10%	200V
		NEON LAMP			
NL901	1-519-237-11	LAMP, NEON			
	*1-616-392-11	FB BOARD			
		********			
		CAPACITOR			
C651	1-136-311-11	FILM	0.47MF	20%	125V
		CONNECTOR			
F20	*1-508-765-00	3P PLUG (M)			
F21	*1-508-765-00	3P PLUG (M)			
		FUSE			
F651 ⚠	1-532-536-11	FUSE, GLASS-TUBE 1A			
	*1-533-146-00	HOLDER, FUSE; F651			
		TRANSFORMER			
T651	1-421-412-00	COIL, FERRITE			
	*A-1245-276-A	F BOARD, COMPLETE			
		**********			
		CAPACITOR			
C603	1-102-125-00	CERAMIC	0.0047MF	10%	50V
C604	1-102-125-00	CERAMIC	0.0047MF	10%	50V
C605	1-123-333-00	ELECT	100MF	20%	25V
C606	1-123-360-00	ELECT	100MF	20%	50V
C609	1-123-334-00	ELECT	220MF	20%	25V
C610	1-123-335-00	ELECT	330MF	20%	25V
C611	1-123-360-00	ELECT	100MF	20%	50V
C614	1-123-332-00	ELECT	47MF	20%	16V
C621 ⚠	1-136-311-51	FILM	0.47MF	20%	125V
C622 ⚠	1-136-311-51	FILM	0.47MF	20%	125V
C623	1-161-953-00	CERAMIC	0.0047MF	20%	400V
C625	1-161-953-00	CERAMIC	0.0047MF	20%	400V
C626	1-161-953-00	CERAMIC	0.0047MF	20%	400V
C627	1-125-295-00	ELECT(BLOCK)	560MF	20%	200V
C628	1-125-295-00	ELECT(BLOCK)	560MF	20%	200V
C629	1-161-953-00	CERAMIC	0.0047MF	20%	400V
C630	1-161-953-00	CERAMIC	0.0047MF	20%	400V
C633	1-102-824-00	CERAMIC	470PF	5%	50V
C635	1-123-323-00	ELECT	470MF	20%	16V
C636	1-123-333-00	ELECT	100MF	20%	16V
C637	1-123-333-00	ELECT	100MF	20%	16V
C638	1-123-330-00	ELECT	22MF	20%	16V
C639	1-123-333-00	ELECT	100MF	20%	16V
C640	1-161-953-00	CERAMIC	0.0047MF	20%	400V
C641	1-162-318-11	CERAMIC	0.001MF	10%	500V
C642	1-161-953-00	CERAMIC	0.0047MF	20%	400V
C1700	1-123-379-00	ELECT	0.47MF	20%	50V
C1701	1-106-220-00	MYLAR	0.1MF	10%	100V
C1702	1-108-637-00	MYLAR	0.082MF	10%	100V
C1703	1-123-332-00	ELECT	47MF	20%	16V
C1704	1-123-380-00	ELECT	1MF	20%	50V
C1705	1-106-220-00	MYLAR	0.1MF	10%	100V
C1706	1-108-614-91	MYLAR	0.001MF	10%	100V
C1708	1-101-004-00	CERAMIC	0.01MF		50V
		DIODE			
D605	8-719-200-02	DIODE 10E2			
D606	8-719-911-19	DIODE 1SS119			
D607	8-719-911-19	DIODE 1SS119			
D609 ⚠	8-719-521-10	DIODE S1VB10-S			
D611	8-719-200-02	DIODE 10E2			
D621	8-719-200-02	DIODE 10E2			
D622	8-719-911-55	DIODE U05G			
D623	8-719-911-55	DIODE U05G			
D624	8-719-981-01	DIODE ERA81-004			
D627	8-719-911-19	DIODE 1SS119			
D628	8-719-102-75	DIODE RD6.2E-N3			
D631	8-719-102-88	DIODE RD9.1E-N3			
D632	8-719-102-62	DIODE RD4.3E-N2			
D633	8-719-911-19	DIODE 1SS119			
D634	8-719-911-19	DIODE 1SS119			
D1700	8-719-200-02	DIODE 10E2			
D1702	8-719-200-02	DIODE 10E2			
		CONNECTOR			
F1	*1-508-765-00	3P PLUG (M)			
F2	*1-508-765-00	3P PLUG (M)			
F3	*1-564-354-00	PLUG, CONNECTOR (2.5MM) 3P			
F4	*1-564-440-11	PLUG, CONNECTOR (2.5MM) 4P			
F5	*1-564-440-11	PLUG, CONNECTOR (2.5MM) 4P			
F10	*1-508-765-00	3P PLUG (M)			
F11	*1-508-784-00	1P PLUG			
F12	*1-564-440-11	PLUG, CONNECTOR (2.5MM) 4P			
F13	*1-564-353-00	PLUG, CONNECTOR (2.5MM) 2P			
		FUSE			
F601 ⚠	1-532-627-11	FUSE, GLASS TUBE 7A/125V			
	1-517-072-00	LAMP HOLDER; F601			
		COIL			
L621 ⚠	1-408-225-11	MICRO INDUCTOR 3.3UH			
L1700	1-443-012-00	TRANSFORMER, DYNAMIC CONVERSION			

NOTE:

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Ref.No.	Part No.	Description				Remark
L1701	1-459-583-11	COIL (WITH CORE)				
		TRANSISTOR				
Q602	8-729-245-83	TRANSISTOR 2SC2458				
Q603	8-729-201-78	TRANSISTOR 2SD1406				
	*4-347-706-00	HEAT SINK (TR); Q603				
Q604	8-729-204-83	TRANSISTOR 2SA1048GR				
Q605	8-729-245-83	TRANSISTOR 2SC2458				
Q607	8-729-245-83	TRANSISTOR 2SC2458				
Q1700	8-729-195-82	TRANSISTOR 2SC2958				
Q1701	8-729-204-83	TRANSISTOR 2SA1048GR				
Q1702	8-729-122-02	TRANSISTOR 2SA1220A				
		RESISTOR				
R604	1-247-232-00	CARBON	470	5%	1/2W	F
R605	1-213-132-11	METAL OXIDE	120	5%	1W	F
R606	1-247-143-00	CARBON	3.3K	5%	1/4W	
R608	1-247-713-11	CARBON	1K	5%	1/4W	
R620	1-202-723-00	SOLID	2.2M	10%	1/2W	
R621 ⚠	1-202-723-51	SOLID	2.2M	10%	1/2W	
R622	1-205-768-11	CEMENTED	1.2	5%	15W	
R623	1-246-525-00	CARBON	150K	5%	1/4W	
R624	1-246-525-00	CARBON	150K	5%	1/4W	
R625	1-247-717-11	CARBON	2.2K	5%	1/4W	
R626	1-247-725-11	CARBON	10K	5%	1/4W	
R627	1-244-879-51	CARBON	1.8K	5%	1/2W	
R628	1-247-145-00	CARBON	3.9K	5%	1/4W	
R629	1-247-713-11	CARBON	1K	5%	1/4W	
R630	1-247-143-00	CARBON	3.3K	5%	1/4W	
R631	1-214-709-00	METAL	150	1%	1/4W	
R632	1-247-113-00	CARBON	180	5%	1/4W	
R636	1-214-711-00	METAL	180	1%	1/4W	
R637	1-247-702-11	CARBON	150	5%	1/4W	
R1700	1-247-119-00	CARBON	330	5%	1/4W	
R1701	1-247-717-11	CARBON	2.2K	5%	1/4W	
R1702	1-247-119-00	CARBON	330	5%	1/4W	
R1703	1-246-507-00	CARBON	27K	5%	1/4W	
R1704	1-246-527-00	CARBON	180K	5%	1/4W	
R1705	1-212-366-00	METAL OXIDE	3.3	5%	1W	F
R1706	1-213-127-00	METAL OXIDE	47	5%	1W	F
		VARIABLE RESISTOR				
RV601 ⚠	1-228-720-11	RES, ADJ, CERAMIC CARBON 1K				
		RELAY				
RY601 ⚠	1-515-491-11	RELAY (POWER)				
		TRANSFORMER				
T601 ⚠	1-448-234-11	TRANSFORMER, POWER				
T602 ⚠	1-421-662-11	LFT				
T603 ⚠	1-421-730-11	LFT				

Ref.No.	Part No.	Description				Remark
		THERMISTOR				
THP601 ⚠	1-806-214-21	THERMISTOR (POSITIVE)				
		**********				
	*1-615-481-11	GA BOARD				
		********				
		DIODE				
D651	8-719-301-18	DIODE RM2CS				
D652	8-719-901-93	DIODE V19E				
D653	8-719-301-18	DIODE RM2CS				
D654	8-719-901-93	DIODE V19E				
		CONNECTOR				
G4	*1-508-765-00	3P PLUG (M)				
		COIL				
L651	1-425-612-00	COIL, ARE-CORE				
L652	1-425-612-00	COIL, ARE-CORE				
L660	1-425-612-00	COIL, ARE-CORE				
L661	1-425-612-00	COIL, ARE-CORE				
		TRANSISTOR				
Q651	8-729-902-00	TRANSISTOR 2SC3163				
	4-374-104-01	HOLDER, TR; Q651				
	4-374-108-01	SPACER, MICA; Q651				
Q652	8-729-902-00	TRANSISTOR 2SC3163				
	4-374-104-01	HOLDER, TR; Q652				
	4-374-108-01	SPACER, MICA; Q652				
		RESISTOR				
R651	1-214-597-00	METAL OXIDE	100K	5%	2W	F
R653	1-202-846-00	SOLID	470K		1/2W	
R655	1-206-439-00	METAL OXIDE	1	5%	2W	F
R656	1-206-439-00	METAL OXIDE	1	5%	2W	F
R660	1-202-846-00	SOLID	470K		1/2W	
R662	1-207-451-00	WIREWOUND	0.1	10%	1/2W	
		TRANSFORMER				
T651	1-421-695-11	CDT				
T652 ⚠	1-421-710-11	PRT				
		**********				
	*1-615-482-11	GB BOARD				
		********				
		CAPACITOR				
C651	1-162-318-11	CERAMIC	0.001MF	10%	500V	
C652	1-136-103-00	FILM	0.1MF	5%	200V	
C653	1-162-318-11	CERAMIC	0.001MF	10%	500V	
C654	1-136-103-00	FILM	0.1MF	5%	200V	

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Ref.No.	Part No.	Description			Remark
C655	1-136-131-00	FILM	0.12MF	5%	400V
C656	1-106-196-00	MYLAR	0.01MF	10%	100V
C658	1-123-356-00	ELECT	10MF	20%	50V
C659	1-129-708-00	FILM	0.0033MF	10%	630V
C660	1-129-708-00	FILM	0.0033MF	10%	630V
C661	1-136-361-00	FILM	0.012MF	3%	1KV
C662	1-125-294-00	ELECT(BLOCK)	560MF	20%	160V
C663	1-102-038-00	CERAMIC	0.001MF		500V
C664	1-102-038-00	CERAMIC	0.001MF		500V
C665	1-123-338-00	ELECT	2200MF	20%	25V
C666	1-123-325-00	ELECT	2200MF	20%	16V
C667	1-102-038-00	CERAMIC	0.001MF		500V
C668	1-102-038-00	CERAMIC	0.001MF		500V
C669	1-123-363-00	ELECT	470MF	20%	50V
C670	1-123-323-00	ELECT	470MF	20%	16V
C672	1-162-318-11	CERAMIC	0.001MF	10%	500V
C673	1-162-318-11	CERAMIC	0.001MF	10%	500V
C680	1-102-002-00	CERAMIC	680PF	10%	500V
C681	1-102-002-00	CERAMIC	680PF	10%	500V
		DIODE			
D655	8-719-300-09	DIODE CTU-24S			
	*4-347-706-00	HEAT SINK (TR); D655			
D656	8-719-903-06	DIODE ERC84-009			
D657	8-719-920-40	DIODE ESAC82-004			
	*4-347-706-00	HEAT SINK (TR); D657			
D658	8-719-301-09	DIODE CTL-12S			
D659	8-719-302-00	DIODE RU-2M			
D660	8-719-903-06	DIODE ERC84-009			
		FUSE			
F651	⚠1-532-557-11	FUSE, GLASS TUBE 3.15A			
	*1-533-146-00	HOLDER, FUSE; F651			
		CONNECTOR			
G5	*1-508-765-00	3P PLUG (M)			
		MODULE			
IC651	⚠1-235-445-11	MODULE, POWER (DM-21)			
		COIL			
L653	1-407-365-00	COIL, CHOKE (HIGH FREQUENCY)			
L654	1-407-780-00	COIL, SPOOK CHOKE			
L656	1-459-406-00	COIL (WITH CORE)			
L657	1-407-365-00	COIL, CHOKE			
L658	1-407-696-00	MICRO INDUCTOR 18UH			
L659	1-407-780-00	COIL, SPOOK CHOKE			
		RESISTOR			
R658	1-247-807-00	CARBON	100	5% 1/8W	F
R659	1-247-807-00	CARBON	100	5% 1/8W	F
R661	1-202-657-15	SOLID	3.3M	5% 1/2W	

Ref.No.	Part No.	Description			Remark
R663	1-215-968-11	METAL	15K	1W	
R664	1-215-969-11	METAL	18K	1W	
R665	1-207-451-00	WIREWOUND	0.1	10% 1/2W	
		TRANSFORMER			
T653	⚠1-421-711-11	PIT			
		**********			
	*1-611-717-11	N BOARD			
		*******			
		CAPACITOR			
C1	1-123-611-00	ELECT	1MF	20%	50V
C2	1-123-613-00	ELECT	3.3MF	20%	50V
C3	1-102-112-00	CERAMIC	330PF	10%	50V
C4	1-123-821-00	ELECT	47MF	20%	16V
		DIODE			
D1	8-719-110-32	DIODE PH302B			
		IC			
IC1	8-752-010-60	IC CX20106			
		RESISTOR			
R1	1-247-799-00	CARBON	47	5% 1/6W	
R2	1-247-775-00	CARBON	4.7	5% 1/6W	
R3	1-214-784-00	METAL	200K	1% 1/4W	
R4	1-247-863-00	CARBON	22K	5% 1/6W	
		**********			
	*A-1296-002-A	A BOARD, COMPLETE			
		**********			
	⚠1-463-471-31	SYNTHESIZER UNIT, FREQUENCY			
	*1-555-110-00	CABLE, PIN			
	*4-374-131-01	LID, UPPER, SHIELD CASE, VIF			
	*4-374-132-01	LID, BOTTOM, SHIELD CASE, VIF			
		CONNECTOR			
A1	*1-564-440-11	PLUG, CONNECTOR (2.5MM) 4P			
A2	*1-564-445-31	PLUG, CONNECTOR (2.5MM) 9P			
A3	*1-564-353-00	PLUG, CONNECTOR (2.5MM) 2P			
A4	*1-564-353-00	PLUG, CONNECTOR (2.5MM) 2P			
		CAPACITOR			
C130	1-123-318-00	ELECT	33MF	20%	16V
C136	1-123-356-00	ELECT	10MF	20%	16V
C137	1-123-356-00	ELECT	10MF	20%	16V
C138	1-123-356-00	ELECT	10MF	20%	16V
C139	1-123-356-00	ELECT	10MF	20%	16V
C140	1-101-003-00	CERAMIC	0.0047MF		50V
C141	1-101-003-00	CERAMIC	0.0047MF		50V
C142	1-101-003-00	CERAMIC	0.0047MF		50V

NOTE:

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Ref.No.	Part No.	Description			Remark
C143	1-123-356-00	ELECT	10MF	20%	16V
C147	1-123-356-00	ELECT	10MF	20%	16V
C148	1-123-333-00	ELECT	100MF	20%	16V
C149	1-123-307-00	ELECT	100MF	20%	10V
C201	1-102-121-00	CERAMIC	0.0022MF	10%	50V
C202	1-102-121-00	CERAMIC	0.0022MF	10%	50V
C203	1-102-851-00	CERAMIC	15PF	5%	50V
C204	1-102-525-00	CERAMIC	68PF	5%	50V
C205	1-123-318-00	ELECT	33MF	20%	16V
C206	1-123-318-00	ELECT	33MF	20%	16V
C208	1-161-021-00	CERAMIC	0.047MF	10%	25V
C209	1-102-824-00	CERAMIC	470PF	5%	50V
C211	1-102-121-00	CERAMIC	0.0022MF	10%	50V
C212	1-101-004-00	CERAMIC	0.01MF		50V
C213	1-161-021-00	CERAMIC	0.047MF	10%	25V
C214	1-102-121-00	CERAMIC	0.0022MF	10%	50V
C215	1-102-121-00	CERAMIC	0.0022MF	10%	50V
C216	1-102-525-00	CERAMIC	68PF	5%	50V
C217	1-123-586-00	ELECT	0.1MF	20%	50V
C218	1-123-586-00	ELECT	0.1MF	20%	50V
C219	1-102-637-00	CERAMIC	12PF	5%	50V
C220	1-102-640-00	CERAMIC	18PF	5%	50V
C221	1-161-013-00	CERAMIC	0.01MF	10%	25V
C222	1-123-379-00	ELECT	0.47MF	20%	50V
C223	1-123-356-00	ELECT	10MF	20%	16V
C226	1-102-121-00	CERAMIC	0.0022MF	10%	50V
C228	1-123-330-00	ELECT	22MF	20%	16V
C231	1-102-121-00	CERAMIC	0.0022MF	10%	50V
C232	1-102-959-00	CERAMIC	22PF	10%	50V
C233	1-102-959-00	CERAMIC	22PF	10%	50V
C234	1-123-379-00	ELECT	0.47MF	20%	50V
C235	1-123-379-00	ELECT	0.47MF	20%	50V
C236	1-123-318-00	ELECT	33MF	20%	16V
C237	1-102-121-00	CERAMIC	0.0022MF	10%	50V
C238	1-102-121-00	CERAMIC	0.0022MF	10%	50V
C239	1-102-752-61	CERAMIC	30PF	5%	50V
C240	1-124-005-11	ELECT	4.7MF	20%	50V
C241	1-101-888-00	CERAMIC	68PF	5%	50V
C242	1-123-381-00	ELECT	2.2MF	20%	50V
C248	1-102-074-00	CERAMIC	0.001MF	10%	50V
C249	1-102-959-00	CERAMIC	22PF	10%	50V
C1602	1-123-333-00	ELECT	100MF	20%	16V
C1603	1-123-343-00	ELECT	33MF	20%	25V

FILTER

CF201	1-409-332-00	CERAMIC TRAP (4.5MHZ)
CF202	1-527-943-00	FILTER, CERAMIC
SWF201	1-404-479-00	SAWF

DIODE

D108	8-719-911-19	DIODE 1SS119
D201	8-719-911-19	DIODE 1SS119
D202	8-719-911-19	DIODE 1SS119
D1605	8-719-102-90	DIODE RD10E-N2

IC

D102	8-759-157-40	IC UPC574J
IC102	8-759-800-65	IC LA7910
IC201	8-752-001-41	IC CX20014A
IC202	8-752-013-90	IC CX20139

COIL

L103	1-408-398-00	MICRO INDUCTOR 1.2UH
L104	1-408-420-00	MICRO INDUCTOR 82UH
L105	1-407-689-00	MICRO INDUCTOR 4.7UH
L106	1-407-689-00	MICRO INDUCTOR 4.7UH
L108	1-407-681-00	MICRO INDUCTOR 1UH
L201	1-408-408-00	MICRO INDUCTOR 8.2UH
L202	1-408-709-00	MICRO INDUCTOR 0.68UH
L204	1-408-408-00	MICRO INDUCTOR 8.2UH
L206	1-408-412-00	MICRO INDUCTOR 18UH
L207	1-408-402-00	MICRO INDUCTOR 2.7UH
L208	1-408-411-00	MICRO INDUCTOR 15UH

TRANSISTOR

Q101	8-729-245-83	TRANSISTOR 2SC2458
Q201	8-729-266-93	TRANSISTOR 2SC2669
Q202	8-729-204-83	TRANSISTOR 2SA1048GR
Q204	8-729-204-83	TRANSISTOR 2SA1048GR
Q205	8-729-245-83	TRANSISTOR 2SC2458
Q1604	8-729-177-32	TRANSISTOR 2SD773

RESISTOR

R100	1-247-147-00	CARBON	4.7K	5%	1/4W
R101	1-247-147-00	CARBON	4.7K	5%	1/4W
R102	1-247-708-11	CARBON	470	5%	1/4W
R103	1-247-708-11	CARBON	470	5%	1/4W
R104	1-247-708-11	CARBON	470	5%	1/4W
R105	1-246-411-75	CARBON	2.7	5%	1/4W
R106	1-247-115-00	CARBON	220	5%	1/4W
R107	1-247-831-00	CARBON	1K	5%	1/6W
R108	1-247-831-00	CARBON	1K	5%	1/6W
R109	1-247-161-00	CARBON	18K	5%	1/4W
R110	1-247-849-00	CARBON	5.6K	5%	1/6W
R201	1-247-837-00	CARBON	1.8K	5%	1/6W
R202	1-249-459-11	CARBON	12K	5%	1/4W
R203	1-247-855-00	CARBON	10K	5%	1/6W
R204	1-247-867-00	CARBON	33K	5%	1/6W
R205	1-247-867-00	CARBON	33K	5%	1/6W
R206	1-247-863-00	CARBON	22K	5%	1/6W
R208	1-247-883-00	CARBON	150K	5%	1/6W
R209	1-247-883-00	CARBON	150K	5%	1/6W
R211	1-247-831-00	CARBON	1K	5%	1/6W
R212	1-247-783-00	CARBON	10	5%	1/6W
R215	1-247-883-00	CARBON	150K	5%	1/6W

A M

Ref.No.	Part No.	Description				Remark
R216	1-247-815-00	CARBON	220	5%	1/6W	
R218	1-247-845-00	CARBON	3.9K	5%	1/6W	
R219	1-247-817-00	CARBON	270	5%	1/6W	
R220	1-247-801-00	CARBON	56	5%	1/6W	
R221	1-247-843-00	CARBON	3.3K	5%	1/6W	
R223	1-247-831-00	CARBON	1K	5%	1/6W	
R228	1-247-833-00	CARBON	1.2K	5%	1/6W	
R229	1-247-803-00	CARBON	68	5%	1/6W	
R234	1-249-421-11	CARBON	2.2K	5%	1/6W	
R235	1-247-821-00	CARBON	390	5%	1/6W	
R237	1-247-803-00	CARBON	68	5%	1/6W	
R238	1-247-847-00	CARBON	4.7K	5%	1/6W	
R239	1-247-713-11	CARBON	1K	5%	1/4W	
R1608	1-212-370-00	METAL OXIDE	6.8	5%	1W	F
R1609	1-247-811-00	CARBON	150	5%	1/6W	
		VARIABLE RESISTOR				
RV201	1-228-723-00	RES, ADJ, CERAMIC CARBON 4.7K				
RV202	1-228-723-00	RES, ADJ, CERAMIC CARBON 4.7K				
		TRANSFORMER				
T201	1-404-541-11	COIL				
T202	1-404-467-00	COIL, VIF				
T203	1-404-467-00	COIL, VIF				
T204	1-404-505-00	COIL				
T205	1-404-489-00	COIL				
		TUNER				
TU101⚠	1-463-470-00	TUNER, ET (BT-896)				
**********						
	*1-613-982-11	M BOARD *******				
		CAPACITOR				
C1301	1-102-978-00	CERAMIC	220PF	5%	50V	
C1302	1-102-978-00	CERAMIC	220PF	5%	50V	
C1303	1-101-004-00	CERAMIC	0.01MF		50V	
C1304	1-123-318-00	ELECT	33MF	20%	16V	
C1305	1-106-196-00	MYLAR	0.01MF	10%	100V	
C1306	1-123-333-00	ELECT	100MF	20%	16V	
C1307	1-102-822-00	CERAMIC	390PF	5%	50V	
C1308	1-101-888-00	CERAMIC	68PF	5%	50V	
C1309	1-102-074-00	CERAMIC	0.001MF	10%	50V	
C1310	1-102-074-00	CERAMIC	0.001MF	10%	50V	
C1311	1-102-074-00	CERAMIC	0.001MF	10%	50V	
C1312	1-102-074-00	CERAMIC	0.001MF	10%	50V	
C1313	1-102-074-00	CERAMIC	0.001MF	10%	50V	
C1314	1-102-074-00	CERAMIC	0.001MF	10%	50V	
		DIODE				
D1305	8-719-911-19	DIODE 1SS119				
D1306	8-719-911-19	DIODE 1SS119				
D1307	8-719-911-19	DIODE 1SS119				
D1308	8-719-911-19	DIODE 1SS119				
D1310	8-719-911-19	DIODE 1SS119				
D1313	8-719-911-19	DIODE 1SS119				
D1314	8-719-911-19	DIODE 1SS119				
D1316	8-719-911-19	DIODE 1SS119				
D1317	8-719-911-19	DIODE 1SS119				
D1320	8-719-911-19	DIODE 1SS119				
D1321	8-719-911-19	DIODE 1SS119				
D1322	8-719-102-58	DIODE RD3.6E-N2				
		IC				
IC1301	8-759-909-49	IC CX23040				
		COIL				
L1301	1-408-405-00	MICRO INDUCTOR 4.7UH				
		CONNECTOR				
M1	*1-564-354-21	PLUG, CONNECTOR (2.5MM) 3P				
M2	*1-564-442-11	PLUG, CONNECTOR (2.5MM) 6P				
M3	*1-564-441-11	PLUG, CONNECTOR (2.5MM) 5P				
M4	*1-564-354-00	PLUG, CONNECTOR (2.5MM) 3P				
M5	*1-564-354-00	PLUG, CONNECTOR (2.5MM) 3P				
M8	*1-564-354-00	PLUG, CONNECTOR (2.5MM) 3P				
M9	*1-564-442-11	PLUG, CONNECTOR (2.5MM) 6P				
		TRANSISTOR				
Q1301	8-729-245-83	TRANSISTOR 2SC2458				
Q1302	8-729-245-83	TRANSISTOR 2SC2458				
Q1303	8-729-245-83	TRANSISTOR 2SC2458				
		RESISTOR				
R1301	1-247-717-11	CARBON	2.2K	5%	1/4W	
R1302	1-247-717-11	CARBON	2.2K	5%	1/4W	
R1303	1-247-717-11	CARBON	2.2K	5%	1/4W	
R1304	1-247-717-11	CARBON	2.2K	5%	1/4W	
R1305	1-247-717-11	CARBON	2.2K	5%	1/4W	
R1306	1-247-717-11	CARBON	2.2K	5%	1/4W	
R1307	1-247-717-11	CARBON	2.2K	5%	1/4W	
R1308	1-247-717-11	CARBON	2.2K	5%	1/4W	
R1309	1-247-717-11	CARBON	2.2K	5%	1/4W	
R1310	1-247-717-11	CARBON	2.2K	5%	1/4W	
R1311	1-247-717-11	CARBON	2.2K	5%	1/4W	
R1312	1-247-171-00	CARBON	47K	5%	1/4W	
R1313	1-247-179-00	CARBON	100K	5%	1/4W	
R1314	1-247-717-11	CARBON	2.2K	5%	1/4W	
R1315	1-246-529-00	CARBON	220K	5%	1/4W	
R1316	1-247-147-00	CARBON	4.7K	5%	1/4W	
R1317	1-247-133-00	CARBON	1.2K	5%	1/4W	
R1318	1-247-708-11	CARBON	470	5%	1/4W	
R1319	1-247-807-00	CARBON	100	5%	1/8W	F
R1320	1-247-725-11	CARBON	10K	5%	1/4W	

NOTE:

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Ref.No.	Part No.	Description				Remark
R1322	1-247-717-11	CARBON	2.2K	5%	1/4W	
R1323	1-247-717-11	CARBON	2.2K	5%	1/4W	
R1324	1-247-717-11	CARBON	2.2K	5%	1/4W	
R1326	1-247-163-00	CARBON	22K	5%	1/4W	
R1327	1-247-119-00	CARBON	330	5%	1/4W	
R1328	1-247-692-11	CARBON	22	5%	1/4W	
R1329	1-247-159-00	CARBON	15K	5%	1/4W	
R1330	1-247-725-11	CARBON	10K	5%	1/4W	
R1331	1-247-708-11	CARBON	470	5%	1/4W	
R1332	1-247-171-00	CARBON	47K	5%	1/4W	
R1333	1-247-717-11	CARBON	2.2K	5%	1/4W	
R1334	1-247-717-11	CARBON	2.2K	5%	1/4W	
R1335	1-247-717-11	CARBON	2.2K	5%	1/4W	
R1336	1-247-713-11	CARBON	1K	5%	1/4W	
R1337	1-247-717-11	CARBON	2.2K	5%	1/4W	
R1338	1-247-717-11	CARBON	2.2K	5%	1/4W	
R1339	1-247-717-11	CARBON	2.2K	5%	1/4W	
R1340	1-247-717-11	CARBON	2.2K	5%	1/4W	
R1341	1-247-717-11	CARBON	2.2K	5%	1/4W	
R1342	1-247-717-11	CARBON	2.2K	5%	1/4W	
R1343	1-247-717-11	CARBON	2.2K	5%	1/4W	
R1344	1-247-717-11	CARBON	2.2K	5%	1/4W	
R1345	1-247-717-11	CARBON	2.2K	5%	1/4W	

SWITCH

SW1301	1-553-976-00	SWITCH, PUSH	
SW1302	1-553-976-00	SWITCH, PUSH	
SW1303	1-553-976-00	SWITCH, PUSH	
SW1304	1-553-976-00	SWITCH, PUSH	
SW1305	1-570-091-11	SWITCH, PUSH (9 KEY)	
SW1306	1-570-090-11	SWITCH, PUSH (2 KEY)	
SW1307	1-570-091-11	SWITCH, PUSH (9 KEY)	
SW1308	1-570-091-11	SWITCH, PUSH (9 KEY)	
SW1309	1-553-976-00	SWITCH, PUSH	
SW1310	1-553-976-00	SWITCH, PUSH	
SW1311	1-570-091-11	SWITCH, PUSH (9 KEY)	
SW1312	1-570-091-11	SWITCH, PUSH (9 KEY)	
SW1313	1-570-091-11	SWITCH, PUSH (9 KEY)	
SW1316	1-570-091-11	SWITCH, PUSH (9 KEY)	
SW1317	1-570-091-11	SWITCH, PUSH (9 KEY)	
SW1319	1-570-091-11	SWITCH, PUSH (9 KEY)	
SW1321	1-554-824-11	SWITCH, PUSH (1 KEY)	
SW1322	1-554-824-11	SWITCH, PUSH (1 KEY)	
SW1323	1-554-824-11	SWITCH, PUSH (1 KEY)	
SW1324	1-570-090-11	SWITCH, PUSH (2 KEY)	

OSCILLATOR

X1301	1-527-476-00	OSCILLATOR, CERAMIC

Ref.No.	Part No.	Description				Remark
	*A-1330-618-A	C BOARD, COMPLETE				
		**********				
	1-526-644-61	SOCKET, CRT				

CONNECTOR

C1	*1-506-371-00	2P PLUG (L)				
C5	*1-508-765-00	3P PLUG (M)				

CAPACITOR

C701	1-129-779-00	FILM	0.022MF	20%	1KV
C702	1-162-115-00	CERAMIC	330PF	10%	2KV
C703	1-123-383-00	ELECT	4.7MF	20%	100V
C704	1-123-948-00	ELECT	22MF	20%	250V
C708	1-123-330-00	ELECT	22MF	20%	16V
C709	1-102-030-00	CERAMIC	330PF	10%	500V
C710	1-102-125-00	CERAMIC	0.0047MF	10%	50V
C711	1-123-948-00	ELECT	22MF	20%	250V
C720	1-102-074-00	CERAMIC	0.001MF	10%	50V
C721	1-102-074-00	CERAMIC	0.001MF	10%	50V
C722	1-102-074-00	CERAMIC	0.001MF	10%	50V
C723	1-102-114-00	CERAMIC	470PF	10%	50V
C724	1-102-114-00	CERAMIC	470PF	10%	50V
C725	1-102-115-00	CERAMIC	560PF	10%	50V
C727	1-106-212-00	MYLAR	0.047MF	10%	100V
C728	1-123-323-00	ELECT	470MF	20%	16V
C730	1-102-116-00	CERAMIC	680PF	10%	50V
C731	1-102-116-00	CERAMIC	680PF	10%	50V
C732	1-102-116-00	CERAMIC	680PF	10%	50V
C733	1-102-074-00	CERAMIC	0.001MF	10%	50V

DIODE

D701	8-719-911-19	DIODE 1SS119
D702	8-719-911-19	DIODE 1SS119
D703	8-719-911-19	DIODE 1SS119
D704	8-719-911-19	DIODE 1SS119
D705	8-719-911-19	DIODE 1SS119
D706	8-719-911-19	DIODE 1SS119
D707	8-719-911-19	DIODE 1SS119

COIL

L701	1-408-450-11	MICRO INDUCTOR 47UH
L702	1-408-450-11	MICRO INDUCTOR 47UH
L703	1-408-450-11	MICRO INDUCTOR 47UH
L705	1-459-598-11	COIL (WITH CORE) (DRUM TYPE)
L709	1-408-557-00	MICRO INDUCTOR 3.3UH

TRANSISTOR

Q701	8-729-326-11	TRANSISTOR 2SC2611
Q702	8-729-326-11	TRANSISTOR 2SC2611
Q703	8-729-326-11	TRANSISTOR 2SC2611
Q704	8-729-245-83	TRANSISTOR 2SC2458
Q705	8-729-245-83	TRANSISTOR 2SC2458

Ref.No.	Part No.	Description				Remark
Q706	8-729-245-83	TRANSISTOR 2SC2458				
Q710	8-729-200-17	TRANSISTOR 2SA1091				
Q711	8-729-200-17	TRANSISTOR 2SA1091				
Q712	8-729-200-17	TRANSISTOR 2SA1091				
Q713	8-729-204-83	TRANSISTOR 2SA1048GR				
Q714	8-729-204-83	TRANSISTOR 2SA1048GR				
		RESISTOR				
R701	1-202-845-00	SOLID	390K		1/2W	
R702	1-202-720-00	SOLID	1.2M	10%	1/2W	
R703	1-202-543-00	SOLID	56	10%	1/2W	
R704	1-202-844-00	SOLID	330K		1/2W	
R705	1-202-815-51	SOLID	47K		1/2W	
R706	1-202-846-00	SOLID	470K		1/2W	
R707	1-202-846-00	SOLID	470K	10%	1/2W	
R712	1-206-747-00	METAL OXIDE	8.2K	5%	3W	F
R713	1-206-747-00	METAL OXIDE	8.2K	5%	3W	F
R714	1-206-747-00	METAL OXIDE	8.2K	5%	3W	F
R715	1-247-807-00	CARBON	100	5%	1/6W	
R720	1-247-807-00	CARBON	100	5%	1/6W	
R727	1-202-549-00	SOLID	100	10%	1/2W	
R728	1-247-855-00	CARBON	10K	5%	1/6W	
R740	1-247-775-00	CARBON	4.7	5%	1/6W	
R742	1-247-775-00	CARBON	4.7	5%	1/6W	
R744	1-247-775-00	CARBON	4.7	5%	1/6W	
R751	1-247-713-11	CARBON	1K	5%	1/4W	
R752	1-247-713-11	CARBON	1K	5%	1/4W	
R753	1-202-824-00	SOLID	3.3K		1/2W	
R754	1-202-824-00	SOLID	3.3K		1/2W	
R755	1-202-824-00	SOLID	3.3K		1/2W	
R756	1-247-807-00	CARBON	100	5%	1/6W	
R757	1-247-713-11	CARBON	1K	5%	1/4W	
R759	1-247-801-00	CARBON	56	5%	1/6W	
R760	1-247-230-00	CARBON	390	5%	1/2W	
R761	1-247-791-00	CARBON	22	5%	1/6W	
R762	1-247-833-00	CARBON	1.2K	5%	1/6W	
R763	1-247-855-00	CARBON	10K	5%	1/6W	
R764	1-247-815-00	CARBON	220	5%	1/6W	
R765	1-247-815-00	CARBON	220	5%	1/6W	
R766	1-247-815-00	CARBON	220	5%	1/6W	
R767	1-247-807-00	CARBON	100	5%	1/6W	
R768	1-247-807-00	CARBON	100	5%	1/6W	
R769	1-247-807-00	CARBON	100	5%	1/6W	
R770	1-247-843-00	CARBON	3.3K	5%	1/6W	
R771	1-247-793-00	CARBON	27	5%	1/6W	
R772	1-247-793-00	CARBON	27	5%	1/6W	
R773	1-247-793-00	CARBON	27	5%	1/6W	
R774	1-247-841-00	CARBON	2.7K	5%	1/6W	
R775	1-247-833-00	CARBON	1.2K	5%	1/6W	
		VARIABLE RESISTOR				
RV701	1-226-157-00	RES, ADJ, METAL GLAZE 1M				

Ref.No.	Part No.	Description			Remark
	*A-1345-537-A	D BOARD, COMPLETE			
		**********			
	*4-363-404-00	HOLDER, IC			
		CAPACITOR			
C500	1-129-701-00	FILM	0.01MF	5%	100V
C501	1-123-360-00	ELECT	100MF	20%	50V
C502	1-123-359-00	ELECT	47MF	20%	50V
C503	1-123-357-00	ELECT	22MF	20%	50V
C504	1-123-332-00	ELECT	47MF	20%	16V
C506	1-108-620-91	MYLAR	0.0033MF	10%	100V
C507	1-108-618-91	MYLAR	0.0022MF	10%	100V
C508	1-106-208-00	MYLAR	0.033MF	10%	100V
C509	1-108-620-91	MYLAR	0.0033MF	10%	100V
C510	1-106-196-00	MYLAR	0.01MF	10%	100V
C513	1-123-379-00	ELECT	0.47MF	20%	50V
C514	1-123-356-00	ELECT	10MF	20%	25V
C515	1-123-356-00	ELECT	10MF	20%	25V
C516	1-123-332-00	ELECT	47MF	20%	25V
C517	1-108-431-00	MYLAR	0.068MF	10%	200V
C518	1-108-429-00	MYLAR	0.047MF	10%	200V
C519	1-123-931-00	ELECT	3.3MF	20%	160V
C520	1-102-212-00	CERAMIC	820PF	10%	500V
C521	1-102-030-00	CERAMIC	330PF	10%	500V
C522	1-123-875-51	ELECT	10MF	20%	50V
C525	1-108-431-00	MYLAR	0.068MF	10%	200V
C526	1-108-437-00	MYLAR	0.22MF	10%	200V
C527	1-102-157-00	CERAMIC	560PF	10%	500V
C528	1-123-364-00	ELECT	1000MF	20%	50V
C530	1-124-035-00	ELECT	47MF	20%	16V
C531	1-123-364-00	ELECT	1000MF	20%	50V
C532	1-102-038-00	CERAMIC	0.001MF		500V
C533	1-108-429-00	MYLAR	0.047MF	10%	200V
C534	1-102-223-00	CERAMIC	0.0047MF	10%	2KV
C535	1-106-377-00	MYLAR	0.027MF	10%	200V
C536	1-123-379-00	ELECT	0.47MF	20%	50V
C537	1-123-384-00	ELECT	10MF	20%	100V
C538 ⚠	1-136-179-11	FILM	1.5MF	5%	200V
C539	1-130-797-11	FILM	0.68MF	5%	250V
C540	1-108-431-00	MYLAR	0.068MF	10%	200V
C541	1-108-614-91	MYLAR	0.001MF	10%	100V
C542	1-136-053-00	FILM	1.2MF	5%	200V
C543	1-130-061-00	FILM	0.0015MF	10%	630V
C544	1-108-686-91	MYLAR	0.0033MF	10%	200V
C545	1-162-115-00	CERAMIC	330PF	10%	2KV
C546 ⚠	1-136-316-51	FILM	0.056MF	5%	630V
C548 ⚠	1-136-317-11	FILM	0.025MF	3%	2KV
C549 ⚠	1-162-115-51	CERAMIC	330PF	10%	2KV
C550	1-123-361-00	ELECT	220MF	20%	50V
C551	1-162-117-00	CERAMIC	100PF	10%	500V
C552	1-106-228-00	MYLAR	0.22MF	10%	100V
C553	1-123-357-00	ELECT	22MF	20%	50V

NOTE:

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Ref.No.	Part No.	Description			Remark
C554	1-102-030-00	CERAMIC	330PF	10%	500V
C555	1-108-614-91	MYLAR	0.001MF	10%	100V
C556	1-123-356-00	ELECT	10MF	20%	16V
C558	1-123-356-00	ELECT	10MF	20%	50V
C560	1-108-622-91	MYLAR	0.0047MF	10%	100V
C561	1-123-382-00	ELECT	3.3MF	20%	50V
C562	1-123-356-00	ELECT	10MF	20%	16V
C563	1-108-614-91	MYLAR	0.001MF	10%	100V
C564	1-123-369-00	ELECT	4.7MF	20%	25V
C565	1-124-005-11	ELECT	4.7MF	20%	50V
C566	1-123-330-00	ELECT	22MF	20%	16V
C567	1-123-093-00	ELECT	22MF	20%	160V
C568	1-102-824-00	CERAMIC	470PF	5%	50V
C569	1-123-332-00	ELECT	47MF	20%	16V
C570	1-123-024-00	ELECT	33MF		160V
C577	1-102-212-00	CERAMIC	820PF	10%	500V
C579	1-123-948-00	ELECT	22MF	20%	250V
C580	1-106-208-00	MYLAR	0.033MF	10%	100V
C581	1-102-117-00	CERAMIC	820PF	10%	50V
C582	1-123-330-00	ELECT	22MF	20%	16V
C583	1-123-330-00	ELECT	22MF	20%	16V
C584	1-102-989-00	CERAMIC	68PF	5%	500V
C585	1-123-380-00	ELECT	1MF	20%	50V
C1600	1-123-335-00	ELECT	330MF	20%	25V
C1601	1-123-323-00	ELECT	470MF	20%	16V
C1604	1-123-333-00	ELECT	100MF	20%	16V
C1605	1-123-318-00	ELECT	33MF	20%	16V
C1606	1-136-171-00	FILM	0.33MF	5%	50V
C1608	1-102-959-00	CERAMIC	22PF	5%	50V
C1609	1-102-989-00	CERAMIC	68PF	5%	500V
C1611	1-108-614-91	MYLAR	0.001MF	10%	100V
C1612	1-108-614-91	MYLAR	0.001MF	10%	100V
C1613	1-106-212-00	MYLAR	0.047MF	10%	100V
C1614	1-106-196-00	MYLAR	0.01MF	10%	100V
C1615	1-108-620-91	MYLAR	0.0033MF	10%	100V
C1616	1-106-224-00	MYLAR	0.15MF	10%	100V
C1617	1-106-192-00	MYLAR	0.0068MF	10%	100V
C1618	1-108-425-00	MYLAR	0.022MF	10%	200V
C1619	1-106-212-00	MYLAR	0.047MF	10%	100V
C1620	1-123-356-00	ELECT	10MF	20%	16V
C1621	1-123-369-00	ELECT	4.7MF	20%	25V
C1623	1-102-973-00	CERAMIC	100PF	5%	50V
C1624	1-106-212-00	MYLAR	0.047MF	10%	100V
C1626	1-123-356-00	ELECT	10MF	20%	16V
C1627	1-123-356-00	ELECT	10MF	20%	16V
C1630	1-123-332-00	ELECT	47MF	20%	16V
C1631	1-123-337-00	ELECT	1000MF	20%	25V
C1632	1-123-324-00	ELECT	1000MF	20%	16V

CONNECTOR

D1	*1-508-767-00	5P PLUG
D2	*1-508-766-00	4P PLUG (M)
D3	*1-508-768-00	6P PLUG
D4	*1-564-354-00	PLUG, CONNECTOR (2.5MM) 3P
D5	*1-564-440-11	PLUG, CONNECTOR (2.5MM) 4P
D6	*1-564-443-11	PLUG, CONNECTOR (2.5MM) 7P
D7	*1-508-765-00	3P PLUG (M)
D8	*1-564-442-11	PLUG, CONNECTOR (2.5MM) 6P
D9	*1-508-766-00	4P PLUG (M)
D10	*1-508-766-00	4P PLUG (M)
D11	*1-564-440-11	PLUG, CONNECTOR (2.5MM) 4P
D12	*1-564-440-11	PLUG, CONNECTOR (2.5MM) 4P
D14	*1-508-765-00	3P PLUG (M)
D15	*1-508-767-00	5P PLUG
DY1	*1-508-765-00	3P PLUG (M)
DY2	*1-508-765-00	3P PLUG (M)
DY3	*1-508-766-00	4P PLUG (M)

DIODE

D500	8-719-911-19	DIODE 1SS119
D501	8-719-101-58	DIODE RD5.6E-L2
D503	8-719-300-76	DIODE RH1A
D505	8-719-200-02	DIODE 10E2
D506	8-719-200-02	DIODE 10E2
D508	8-719-911-19	DIODE 1SS119
D509	8-719-300-38	DIODE GU-3A
D510	8-719-300-76	DIODE RH1A
D511	8-719-901-19	DIODE V11N
D512	8-719-200-02	DIODE 10E2
D513	8-719-200-02	DIODE 10E2
D514	8-719-300-65	DIODE ES1F
D515	8-719-305-15	DIODE GH3F
D516	8-719-305-15	DIODE GH3F
D517	8-719-900-26	DIODE ERD29-08J
D518	8-719-190-00	DIODE RD24E-BZ7
D520	8-719-911-19	DIODE 1SS119
D521	8-719-911-19	DIODE 1SS119
D522	8-719-100-35	DIODE RD5.6E-B2
D523	8-719-911-19	DIODE 1SS119
D524	8-719-110-07	DIODE RD10E-B
D525	8-719-200-02	DIODE 10E2
D527	8-719-911-19	DIODE 1SS119
D528	8-719-911-19	DIODE 1SS119
D529	8-719-102-70	DIODE RD5.6E-N1
D530	8-719-911-19	DIODE 1SS119
D1603	8-719-102-72	DIODE RD5.6E-N3
D1607	8-719-100-80	DIODE RD20E-B2
D1608	8-719-911-19	DIODE 1SS119

IC

IC500	8-759-700-42	IC NJM2904D
IC501	8-759-700-42	IC NJM2904D
IC502	8-759-700-81	IC NJM555D
IC1601	8-749-930-52	IC SI-3052V
	4-363-414-00	SPACER, MICA; IC1601

D

Ref.No.	Part No.	Description	Remark
		COIL	
L500	1-459-119-00	COIL, DUST CORE(ARC)	
L501	1-407-877-00	MICRO INDUCTOR 15MMH	
L502	1-408-225-00	MICRO INDUCTOR 3.3UH	
L503	1-459-104-00	COIL, DUST CORE	
L504	1-459-104-00	COIL, DUST CORE	
L505 ⚠	1-459-485-11	COIL, CHOKE	
L506	1-408-225-00	MICRO INDUCTOR 3.3UH	
L507	1-407-500-00	MICRO INDUCTOR 4.7MMH	
L508	1-459-059-00	COIL, DUST CORE	
L509 ⚠	1-421-390-11	COIL, FERRITE (PMC)	
L510	1-407-365-00	COIL, CHOKE	
L511	1-407-365-00	COIL, CHOKE	
L512	1-407-365-00	COIL, CHOKE	
L513	1-459-215-00	CORE COIL	
L514	1-459-075-00	COIL, DYNAMIC CONVERSION CHOKE	
L515 ⚠	1-459-284-11	HLC (FERRITE CHOKE)	
L516	1-407-365-00	COIL, CHOKE	
L517	1-408-247-00	MICRO INDUCTOR 33MMH	
		NEON LAMP	
NL501	1-519-237-11	LAMP, NEON	
		TRANSISTOR	
Q500	8-729-122-02	TRANSISTOR 2SA1220A	
	*4-329-153-00	HEAT SINK, V OUT; Q500	
Q501	8-729-169-02	TRANSISTOR 2SC2690A	
	*4-329-153-00	HEAT SINK, V OUT; Q501	
Q502	8-729-801-45	TRANSISTOR 2SC3064	
Q504	8-729-245-83	TRANSISTOR 2SC2458	
Q505	8-729-245-83	TRANSISTOR 2SC2458	
Q506	8-729-245-83	TRANSISTOR 2SC2458	
Q507	8-729-204-83	TRANSISTOR 2SA1048GR	
Q508	8-729-323-82	TRANSISTOR 2SD1138-02-C	
Q509	8-729-294-00	TRANSISTOR 2SA940	
Q510	8-729-195-82	TRANSISTOR 2SC2958	
Q511	8-729-300-90	TRANSISTOR 2SD1497-06	
	4-363-414-00	SPACER, MICA; Q511	
Q512	8-729-245-83	TRANSISTOR 2SC2458	
Q513	8-729-168-82	TRANSISTOR 2SC2688	
Q514	8-729-245-83	TRANSISTOR 2SC2458	
Q515	8-729-245-83	TRANSISTOR 2SC2458	
Q517	8-729-204-83	TRANSISTOR 2SA1048GR	
Q518	8-729-313-42	TRANSISTOR 2SD1134	
	4-342-013-00	SPACER, MICA; Q518	
	4-374-104-01	HOLDER, TR; Q518	
Q1600	8-729-313-42	TRANSISTOR 2SD1134	
	4-342-013-00	SPACER, MICA; Q1600	
	4-374-104-01	HOLDER, TR; Q1600	
Q1605	8-729-113-32	TRANSISTOR 2SB733	
Q1606	8-729-245-83	TRANSISTOR 2SC2458	
Q1607	8-729-245-83	TRANSISTOR 2SC2458	

Ref.No.	Part No.	Description				Remark
		RESISTOR				
R500	1-247-799-00	CARBON	47	5%	1/8W	F
R501	1-247-843-00	CARBON	3.3K	5%	1/6W	
R502	1-247-863-00	CARBON	22K	5%	1/6W	
R503	1-247-847-00	CARBON	4.7K	5%	1/6W	
R504	1-247-863-00	CARBON	22K	5%	1/6W	
R505	1-247-799-00	CARBON	47	5%	1/8W	F
R506	1-247-843-00	CARBON	3.3K	5%	1/6W	
R508	1-247-875-00	CARBON	68K	5%	1/6W	
R509	1-247-831-00	CARBON	1K	5%	1/6W	
R510	1-247-875-00	CARBON	68K	5%	1/6W	
R511	1-247-855-00	CARBON	10K	5%	1/6W	
R512	1-247-700-11	CARBON	100	5%	1/4W	
R513	1-247-873-00	CARBON	56K	5%	1/6W	
R514	1-247-855-00	CARBON	10K	5%	1/6W	
R515	1-247-833-00	CARBON	1.2K	5%	1/6W	
R516	1-247-871-00	CARBON	47K	5%	1/6W	
R517	1-247-855-00	CARBON	10K	5%	1/6W	
R518	1-247-167-00	CARBON	33K	5%	1/4W	
R519	1-247-855-00	CARBON	10K	5%	1/6W	
R520	1-247-871-00	CARBON	47K	5%	1/6W	
R521	1-247-837-00	CARBON	1.8K	5%	1/6W	
R522	1-247-167-00	CARBON	33K	5%	1/4W	
R523	1-247-147-00	CARBON	4.7K	5%	1/4W	
R524	1-247-875-00	CARBON	68K	5%	1/6W	
R526	1-247-843-00	CARBON	3.3K	5%	1/6W	
R527	1-247-115-00	CARBON	220	5%	1/4W	
R528	1-249-421-11	CARBON	2.2K	5%	1/6W	
R529	1-247-171-00	CARBON	47K	5%	1/4W	
R530	1-247-877-00	CARBON	82K	5%	1/6W	
R531	1-247-855-00	CARBON	10K	5%	1/6W	
R532	1-244-919-00	CARBON	82K	5%	1/2W	
R533	1-247-887-00	CARBON	220K	5%	1/6W	
⊠R534 ⚠		METAL			1/4W	
R536	1-215-475-00	METAL	180K	1%	1/6W	
R537	1-247-167-00	CARBON	33K	5%	1/4W	
R540	1-247-807-00	CARBON	100	5%	1/8W	F
R541	1-213-145-00	METAL OXIDE	1.5K	5%	1W	F
R543	1-212-361-00	METAL OXIDE	1.2	5%	1W	F
R546	1-247-791-00	CARBON	22	5%	1/8W	F
R547	1-212-361-00	METAL OXIDE	1.2	5%	1W	F
R548	1-247-034-00	CARBON	220	5%	1/8W	F
R549	1-213-141-00	METAL OXIDE	680	5%	1W	F
R550	1-247-837-00	CARBON	1.8K	5%	1/6W	
R551	1-247-725-11	CARBON	10K	5%	1/4W	
R552	1-212-360-00	METAL OXIDE	1	5%	1W	F
R553	1-247-831-00	CARBON	1K	5%	1/6W	
R554	1-247-797-00	CARBON	39	5%	1/8W	F
R555	1-213-148-00	METAL OXIDE	2.7K	5%	1W	F
R557	1-210-859-00	CARBON	1.2	5%	1/8W	F
R558	1-206-511-00	METAL OXIDE	10	5%	3W	F
R559	1-213-146-00	METAL OXIDE	1.8K	5%	1W	F

NOTE:

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Ref.No.	Part No.	Description				Remark
R560	1-214-910-00	METAL	75K	1%	1/2W	
R561	1-213-125-00	METAL OXIDE	33	5%	1W	F
R562	1-246-994-00	CARBON	680	5%	1/8W	F
R563	1-206-485-00	METAL OXIDE	82	5%	2W	F
R564	1-213-141-00	METAL OXIDE	680	5%	1W	F
R565	1-206-658-00	METAL OXIDE	560	5%	2W	F
R566	1-247-807-00	CARBON	100	5%	1/6W	
R567	1-215-075-00	METAL OXIDE	0.47	5%	2W	F
R568	1-206-467-00	METAL OXIDE	15	5%	2W	F
R569	1-247-829-00	CARBON	820	5%	1/6W	
R570	1-206-692-00	METAL OXIDE	15K	5%	2W	F
R571	1-247-855-00	CARBON	10K	5%	1/6W	
R572	1-215-445-00	METAL	10K	1%	1/6W	
⊠ R573 ⚠		METAL			1/4W	
R574	1-215-443-00	METAL	8.2K	1%	1/6W	
R576	1-215-431-00	METAL	2.7K	1%	1/6W	
R577	1-246-531-00	CARBON	270K	5%	1/4W	
R578	1-215-440-00	METAL	6.2K	1%	1/6W	
R579	1-247-897-00	CARBON	560K	5%	1/6W	
R580	1-247-815-00	CARBON	220	5%	1/6W	
R581	1-215-469-00	METAL	100K	1%	1/6W	
R582	1-202-721-00	SOLID	1.5M	10%	1/2W	
R583	1-247-887-00	CARBON	220K	5%	1/6W	
R584	1-215-445-00	METAL	10K	1%	1/6W	
R585	1-247-901-00	CARBON	820K	5%	1/6W	
R586	1-247-873-00	CARBON	56K	5%	1/6W	
R587	1-247-855-00	CARBON	10K	5%	1/6W	
R588	1-247-901-00	CARBON	820K	5%	1/6W	
R589	1-247-843-00	CARBON	3.3K	5%	1/6W	
R590	1-247-877-00	CARBON	82K	5%	1/6W	
R591	1-247-855-00	CARBON	10K	5%	1/6W	
R592	1-247-901-00	CARBON	820K	5%	1/6W	
R593	1-247-855-00	CARBON	10K	5%	1/6W	
R594	1-247-161-00	CARBON	18K	5%	1/4W	
R595	1-247-167-00	CARBON	33K	5%	1/4W	
R596	1-247-713-11	CARBON	1K	5%	1/4W	
R599	1-247-885-00	CARBON	180K	5%	1/6W	
R600	1-206-656-00	METAL OXIDE	470	5%	2W	F
R1500	1-215-480-81	METAL	300K	1%	1/6W	
R1501	1-249-421-11	CARBON	2.2K	5%	1/6W	
R1502	1-215-442-00	METAL	7.5K	1%	1/6W	
R1503	1-247-847-00	CARBON	4.7K	5%	1/6W	
R1504	1-247-855-00	CARBON	10K	5%	1/6W	
R1505	1-247-855-00	CARBON	10K	5%	1/6W	
R1519	1-213-153-51	METAL OXIDE	6.8K	5%	1W	F
R1522	1-202-813-00	SOLID	22K		1/2W	
R1524	1-213-148-00	METAL OXIDE	2.7K	5%	1W	F
R1525	1-205-782-11	CEMENTED	68	5%	10W	
R1526	1-215-447-00	METAL	12K	1%	1/6W	
R1527	1-247-799-00	CARBON	47	5%	1/8W	F
R1528	1-210-859-00	CARBON	1.2	5%	1/8W	F
R1529	1-247-857-00	CARBON	12K	5%	1/6W	
R1530	1-247-855-00	CARBON	10K	5%	1/6W	
R1609	1-247-700-11	CARBON	100	5%	1/4W	
R1610	1-247-119-00	CARBON	330	5%	1/4W	
R1612	1-249-455-11	CARBON	4.7	5%	1/4W	F
R1613	1-247-702-11	CARBON	150	5%	1/4W	
R1614	1-206-696-00	METAL OXIDE	22K	5%	2W	F
R1615	1-206-696-00	METAL OXIDE	22K	5%	2W	F
R1616	1-215-429-00	METAL	2.2K	1%	1/6W	
R1617	1-215-428-00	METAL	2K	1%	1/6W	
R1620	1-247-855-00	CARBON	10K	5%	1/6W	
R1621	1-247-871-00	CARBON	47K	5%	1/6W	
R1622	1-247-795-00	CARBON	33	5%	1/8W	F
R1623	1-247-847-00	CARBON	4.7K	5%	1/6W	
R1625	1-249-421-11	CARBON	2.2K	5%	1/6W	
R1626	1-247-843-00	CARBON	3.3K	5%	1/6W	
R1627	1-247-853-00	CARBON	8.2K	5%	1/6W	
R1628	1-247-853-00	CARBON	8.2K	5%	1/6W	
R1629	1-247-889-00	CARBON	270K	5%	1/6W	
R1630	1-247-713-11	CARBON	1K	5%	1/4W	
R1631	1-247-883-00	CARBON	150K	5%	1/6W	
R1632	1-206-642-11	METAL OXIDE	120	5%	2W	F
R1633	1-247-819-00	CARBON	330	5%	1/6W	
R1634	1-247-819-00	CARBON	330	5%	1/6W	
R1635	1-247-823-00	CARBON	470	5%	1/6W	
R1636	1-247-831-00	CARBON	1K	5%	1/6W	
R1637	1-247-895-00	CARBON	470K	5%	1/6W	
R1638	1-247-855-00	CARBON	10K	5%	1/6W	
R1639	1-247-173-00	CARBON	56K	5%	1/4W	
R1641	1-206-485-00	METAL OXIDE	82	5%	2W	F
R1642	1-206-485-00	METAL OXIDE	82	5%	2W	F
R1645	1-247-871-00	CARBON	47K	5%	1/6W	
R1646	1-247-871-00	CARBON	47K	5%	1/6W	
R1648	1-247-831-00	CARBON	1K	5%	1/6W	
R1649	1-247-879-00	CARBON	100K	5%	1/6W	
R1650	1-247-819-00	CARBON	330	5%	1/6W	
R1651	1-213-163-00	METAL OXIDE	47K	5%	1W	F
R1652	1-206-487-00	METAL OXIDE	1	5%	3W	F
R1653	1-206-491-00	METAL OXIDE	1.5	5%	3W	F

VARIABLE RESISTOR

RV500 ⚠	1-228-727-11	RES, ADJ, CERAMIC CARBON	47K
RV501	1-228-727-00	RES, ADJ, CERAMIC CARBON	47K
RV502	1-228-724-00	RES, ADJ, CERAMIC CARBON	10K
RV503	1-228-724-00	RES, ADJ, CERAMIC CARBON	10K
RV504	1-228-727-00	RES, ADJ, CERAMIC CARBON	47K
RV505	1-228-722-00	RES, ADJ, CERAMIC CARBON	3.3K

SPARK GAP

SG500	1-519-063-XX	DISCHARGING GAP

TRANSFORMER

T500	1-413-059-00	TRANSFORMER, FERRITE (DFT)
T502	1-437-131-00	TRANSFORMER, DRIVE

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U

Ref.No.	Part No.	Description			Remark
	*A-1381-040-A	U BOARD, COMPLETE			
		**********			
	1-536-930-11	TERMINAL BOARD, INPUT/OUTPUT			
	4-349-613-00	BUTTON, FUNCTION			
		CAPACITOR			
C3000	1-124-234-00	ELECT	22MF	20%	16V
C3001	1-123-379-00	ELECT	0.47MF	20%	50V
C3002	1-102-965-00	CERAMIC	39PF	5%	50V
C3003	1-102-965-00	CERAMIC	39PF	5%	50V
C3004	1-102-965-00	CERAMIC	39PF	5%	50V
C3005	1-123-330-00	ELECT	22MF	20%	16V
C3006	1-123-332-00	ELECT	47MF	20%	16V
C3007	1-102-125-00	CERAMIC	0.0047MF	10%	50V
C3008	1-123-318-00	ELECT	33MF	20%	16V
C3009	1-123-318-00	ELECT	33MF	20%	16V
C3010	1-123-318-00	ELECT	33MF	20%	16V
C3011	1-124-236-00	ELECT	47MF	20%	16V
C3012	1-123-333-00	ELECT	100MF	20%	16V
C3013	1-101-006-00	CERAMIC	0.047MF		50V
C3014	1-123-333-00	ELECT	100MF	20%	16V
C3015	1-101-006-00	CERAMIC	0.047MF		50V
C3016	1-101-006-00	CERAMIC	0.047MF		50V
C3017	1-123-323-00	ELECT	470MF	20%	16V
C3018	1-123-311-00	ELECT	1000MF	20%	10V
C3019	1-123-307-00	ELECT	100MF	20%	6.3V
C3020	1-123-310-00	ELECT	470MF	20%	10V
C3021	1-101-884-00	CERAMIC	56PF	5%	50V
C3022	1-124-236-00	ELECT	47MF	20%	16V
C3023	1-123-332-00	ELECT	47MF	20%	16V
C3024	1-123-332-00	ELECT	47MF	20%	16V
C3025	1-123-332-00	ELECT	47MF	20%	16V
C3026	1-123-332-00	ELECT	47MF	20%	16V
C3027	1-123-325-00	ELECT	2200MF	20%	16V
C3028	1-123-325-00	ELECT	2200MF	20%	16V
C3029	1-123-325-00	ELECT	2200MF	20%	16V
C3030	1-123-318-00	ELECT	33MF	20%	16V
C3031	1-123-380-00	ELECT	1MF	20%	50V
C3032	1-123-380-00	ELECT	1MF	20%	50V
C3033	1-124-255-00	ELECT	1MF	20%	50V
C3034	1-123-380-00	ELECT	1MF	20%	50V
C3035	1-123-380-00	ELECT	1MF	20%	50V
C3036	1-124-255-00	ELECT	1MF	20%	50V
C3037	1-124-255-00	ELECT	1MF	20%	50V
C3038	1-123-380-00	ELECT	1MF	20%	50V
C3039	1-123-380-00	ELECT	1MF	20%	50V
C3040	1-123-380-00	ELECT	1MF	20%	50V
C3041	1-123-321-00	ELECT	220MF	20%	16V
C3042	1-123-318-00	ELECT	33MF	20%	16V
C3044	1-124-255-00	ELECT	1MF	20%	50V
C3045	1-124-255-00	ELECT	1MF	20%	50V
C3046	1-124-255-00	ELECT	1MF	20%	50V
C3047	1-124-255-00	ELECT	1MF	20%	50V
C3048	1-101-005-00	CERAMIC	0.022MF		50V
C3049	1-101-005-00	CERAMIC	0.022MF		50V
C3050	1-102-978-00	CERAMIC	220PF	5%	50V
C3051	1-123-332-00	ELECT	47MF	20%	16V
C3052	1-101-006-00	CERAMIC	0.047MF		50V
C3053	1-101-361-00	CERAMIC	150PF	5%	50V
C3054	1-123-324-00	ELECT	1000MF	20%	16V
C3055	1-102-973-00	CERAMIC	100PF	5%	50V
		CONNECTOR			
CNJ300	*1-560-984-00	CONNECTOR (PLUG) 34P			
		DIODE			
D3000	8-719-102-73	DIODE RD6.2E-N1			
D3001	8-719-911-19	DIODE 1SS119			
D3002	8-719-911-19	DIODE 1SS119			
D3003	8-719-911-19	DIODE 1SS119			
D3004	8-719-911-19	DIODE 1SS119			
D3005	8-719-102-73	DIODE RD6.2E-N1			
D3006	8-719-102-73	DIODE RD6.2E-N1			
D3011	8-719-102-73	DIODE RD6.2E-N1			
D3012	8-719-911-19	DIODE 1SS119			
D3013	8-719-911-19	DIODE 1SS119			
D3014	8-719-911-19	DIODE 1SS119			
D3015	8-719-911-19	DIODE 1SS119			
D3016	8-719-911-19	DIODE 1SS119			
D3017	8-719-911-19	DIODE 1SS119			
D3018	8-719-911-19	DIODE 1SS119			
D3019	8-719-102-73	DIODE RD6.2E-N1			
D3020	8-719-102-73	DIODE RD6.2E-N1			
D3021	8-719-911-19	DIODE 1SS119			
D3022	8-719-911-19	DIODE 1SS119			
D3023	8-719-102-73	DIODE RD6.2E-N1			
D3024	8-719-911-19	DIODE 1SS119			
		IC			
IC3000	8-759-900-09	IC SN74LS09N			
IC3001	8-759-045-51	IC MC14551BCP			
IC3002	8-759-240-52	IC TC4052BP			
IC3003	8-759-145-58	IC UPC4558C			
IC3004	8-759-240-52	IC TC4052BP			
IC3005	8-759-240-52	IC TC4052BP			
IC3006	8-759-108-05	IC UPC78L05A			
		COIL			
L3000	1-408-403-00	MICRO INDUCTOR 3.3UH			
L3001	1-408-403-00	MICRO INDUCTOR 3.3UH			
L3002	1-408-417-00	MICRO INDUCTOR 47UH			
L3003	1-408-235-00	MICRO INDUCTOR 2.2MMH			

TRANSISTOR

Ref.No.	Part No.	Description	Remark
Q3000	8-729-245-83	TRANSISTOR 2SC2458	
Q3001	8-729-204-83	TRANSISTOR 2SA1048GR	
Q3002	8-729-204-83	TRANSISTOR 2SA1048GR	
Q3003	8-729-204-83	TRANSISTOR 2SA1048GR	
Q3004	8-729-204-83	TRANSISTOR 2SA1048GR	
Q3005	8-729-245-83	TRANSISTOR 2SC2458	
Q3006	8-729-245-83	TRANSISTOR 2SC2458	
Q3007	8-729-245-83	TRANSISTOR 2SC2458	
Q3008	8-729-245-83	TRANSISTOR 2SC2458	
Q3009	8-729-245-83	TRANSISTOR 2SC2458	
Q3010	8-729-245-83	TRANSISTOR 2SC2458	
Q3011	8-729-245-83	TRANSISTOR 2SC2458	
Q3012	8-729-245-83	TRANSISTOR 2SC2458	
Q3013	8-729-245-83	TRANSISTOR 2SC2458	
Q3014	8-729-245-83	TRANSISTOR 2SC2458	
Q3015	8-729-245-83	TRANSISTOR 2SC2458	
Q3016	8-729-245-83	TRANSISTOR 2SC2458	
Q3017	8-729-245-83	TRANSISTOR 2SC2458	
Q3018	8-729-204-83	TRANSISTOR 2SA1048GR	
Q3019	8-729-204-83	TRANSISTOR 2SA1048GR	
Q3020	8-729-204-83	TRANSISTOR 2SA1048GR	
Q3021	8-729-245-83	TRANSISTOR 2SC2458	
Q3022	8-729-900-89	TRANSISTOR DTC144ES	
Q3023	8-729-204-83	TRANSISTOR 2SA1048GR	
Q3024	8-729-204-83	TRANSISTOR 2SA1048GR	
Q3025	8-729-204-83	TRANSISTOR 2SA1048GR	
Q3026	8-729-204-83	TRANSISTOR 2SA1048GR	
Q3027	8-729-204-83	TRANSISTOR 2SA1048GR	
Q3028	8-729-204-83	TRANSISTOR 2SA1048GR	
Q3029	8-729-204-83	TRANSISTOR 2SA1048GR	
Q3030	8-729-245-83	TRANSISTOR 2SC2458	
Q3031	8-729-245-83	TRANSISTOR 2SC2458	
Q3032	8-729-204-83	TRANSISTOR 2SA1048GR	
Q3033	8-729-900-89	TRANSISTOR DTC144ES	
Q3034	8-729-900-89	TRANSISTOR DTC144ES	
Q3035	8-729-245-83	TRANSISTOR 2SC2458	
Q3036	8-729-245-83	TRANSISTOR 2SC2458	
Q3037	8-729-204-83	TRANSISTOR 2SA1048GR	
Q3038	8-729-204-83	TRANSISTOR 2SA1048GR	
Q3039	8-729-245-83	TRANSISTOR 2SC2458	
Q3040	8-729-204-83	TRANSISTOR 2SA1048GR	
Q3041	8-729-204-83	TRANSISTOR 2SA1048GR	
Q3042	8-729-204-83	TRANSISTOR 2SA1048GR	
Q3043	8-729-204-83	TRANSISTOR 2SA1048GR	
Q3045	8-729-204-83	TRANSISTOR 2SA1048GR	
Q3046	8-729-204-83	TRANSISTOR 2SA1048GR	
Q3047	8-729-204-83	TRANSISTOR 2SA1048GR	
Q3048	8-729-245-83	TRANSISTOR 2SC2458	
Q3049	8-729-245-83	TRANSISTOR 2SC2458	
Q3050	8-729-204-83	TRANSISTOR 2SA1048GR	
Q3051	8-729-204-83	TRANSISTOR 2SA1048GR	
Q3052	8-729-245-83	TRANSISTOR 2SC2458	
Q3053	8-729-204-83	TRANSISTOR 2SA1048GR	
Q3054	8-729-204-83	TRANSISTOR 2SA1048GR	

RESISTOR

Ref.No.	Part No.	Description				Remark
R3000	1-247-871-00	CARBON	47K	5%	1/6W	
R3001	1-247-871-00	CARBON	47K	5%	1/6W	
R3002	1-247-807-00	CARBON	100	5%	1/6W	
R3003	1-247-807-00	CARBON	100	5%	1/6W	
R3004	1-247-807-00	CARBON	100	5%	1/6W	
R3005	1-247-700-11	CARBON	100	5%	1/4W	
R3006	1-247-735-11	CARBON	47	5%	1/2W	F
R3007	1-247-115-00	CARBON	220	5%	1/4W	
R3008	1-247-115-00	CARBON	220	5%	1/4W	
R3009	1-247-115-00	CARBON	220	5%	1/4W	
R3010	1-247-115-00	CARBON	220	5%	1/4W	
R3011	1-247-115-00	CARBON	220	5%	1/4W	
R3012	1-247-831-00	CARBON	1K	5%	1/6W	
R3013	1-247-855-00	CARBON	10K	5%	1/6W	
R3014	1-247-845-00	CARBON	3.9K	5%	1/6W	
R3015	1-247-135-00	CARBON	1.5K	5%	1/4W	
R3016	1-247-127-00	CARBON	680	5%	1/4W	
R3017	1-247-827-00	CARBON	680	5%	1/6W	
R3018	1-247-827-00	CARBON	680	5%	1/6W	
R3019	1-247-823-00	CARBON	470	5%	1/6W	
R3020	1-247-713-11	CARBON	1K	5%	1/4W	
R3021	1-247-815-00	CARBON	220	5%	1/6W	
R3022	1-247-147-00	CARBON	4.7K	5%	1/4W	
R3023	1-247-835-00	CARBON	1.5K	5%	1/6W	
R3024	1-247-851-00	CARBON	6.8K	5%	1/6W	
R3025	1-247-103-00	CARBON	68	5%	1/4W	
R3026	1-247-699-11	CARBON	82	5%	1/4W	
R3027	1-247-699-11	CARBON	82	5%	1/4W	
R3028	1-247-699-11	CARBON	82	5%	1/4W	
R3029	1-247-097-00	CARBON	39	5%	1/4W	
R3030	1-247-725-11	CARBON	10K	5%	1/4W	
R3031	1-247-725-11	CARBON	10K	5%	1/4W	
R3032	1-247-855-00	CARBON	10K	5%	1/6W	
R3033	1-247-855-00	CARBON	10K	5%	1/6W	
R3034	1-247-855-00	CARBON	10K	5%	1/6W	
R3035	1-247-849-00	CARBON	5.6K	5%	1/6W	
R3036	1-247-147-00	CARBON	4.7K	5%	1/4W	
R3037	1-247-713-11	CARBON	1K	5%	1/4W	
R3038	1-247-855-00	CARBON	10K	5%	1/6W	
R3039	1-247-873-00	CARBON	56K	5%	1/6W	
R3041	1-247-865-00	CARBON	27K	5%	1/6W	
R3042	1-247-869-00	CARBON	39K	5%	1/6W	
R3043	1-247-869-00	CARBON	39K	5%	1/6W	
R3044	1-247-851-00	CARBON	6.8K	5%	1/6W	
R3045	1-247-851-00	CARBON	6.8K	5%	1/6W	
R3046	1-247-871-00	CARBON	47K	5%	1/6W	
R3047	1-247-871-00	CARBON	47K	5%	1/6W	
R3048	1-247-893-00	CARBON	390K	5%	1/6W	

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Ref.No.	Part No.	Description				Remark
R3049	1-247-855-00	CARBON	10K	5%	1/6W	
R3050	1-247-865-00	CARBON	27K	5%	1/6W	
R3052	1-246-535-00	CARBON	390K	5%	1/4W	
R3053	1-247-893-00	CARBON	390K	5%	1/6W	
R3054	1-247-893-00	CARBON	390K	5%	1/6W	
R3055	1-246-507-00	CARBON	27K	5%	1/4W	
R3056	1-246-507-00	CARBON	27K	5%	1/4W	
R3057	1-246-507-00	CARBON	27K	5%	1/4W	
R3058	1-246-507-00	CARBON	27K	5%	1/4W	
R3060	1-247-115-00	CARBON	220	5%	1/4W	
R3061	1-247-713-11	CARBON	1K	5%	1/4W	
R3062	1-247-713-11	CARBON	1K	5%	1/4W	
R3063	1-247-831-00	CARBON	1K	5%	1/6W	
R3064	1-247-845-00	CARBON	3.9K	5%	1/6W	
R3065	1-247-831-00	CARBON	1K	5%	1/6W	
R3066	1-247-143-00	CARBON	3.3K	5%	1/4W	
R3067	1-247-847-00	CARBON	4.7K	5%	1/6W	
R3068	1-247-831-00	CARBON	1K	5%	1/6W	
R3069	1-247-831-00	CARBON	1K	5%	1/6W	
R3070	1-247-807-00	CARBON	100	5%	1/6W	
R3071	1-247-847-00	CARBON	4.7K	5%	1/6W	
R3072	1-247-831-00	CARBON	1K	5%	1/6W	
R3073	1-247-700-11	CARBON	100	5%	1/4W	
R3074	1-247-807-00	CARBON	100	5%	1/6W	
R3075	1-247-700-11	CARBON	100	5%	1/4W	
R3076	1-247-725-11	CARBON	10K	5%	1/4W	
R3077	1-247-847-00	CARBON	4.7K	5%	1/6W	
R3078	1-247-867-00	CARBON	33K	5%	1/6W	
R3079	1-247-843-00	CARBON	3.3K	5%	1/6W	
R3080	1-247-859-00	CARBON	15K	5%	1/6W	
R3081	1-247-823-00	CARBON	470	5%	1/6W	
R3082	1-247-822-00	CARBON	430	5%	1/6W	
R3083	1-247-847-00	CARBON	4.7K	5%	1/6W	
R3084	1-247-831-00	CARBON	1K	5%	1/6W	
R3085	1-247-859-00	CARBON	15K	5%	1/6W	
R3086	1-247-823-00	CARBON	470	5%	1/6W	
R3087	1-247-117-00	CARBON	270	5%	1/4W	
R3088	1-247-831-00	CARBON	1K	5%	1/6W	
R3090	1-246-463-00	CARBON	390	5%	1/4W	
R3091	1-247-823-00	CARBON	470	5%	1/6W	
R3092	1-247-831-00	CARBON	1K	5%	1/6W	
R3093	1-247-831-00	CARBON	1K	5%	1/6W	
R3094	1-247-831-00	CARBON	1K	5%	1/6W	
R3095	1-247-143-00	CARBON	3.3K	5%	1/4W	
R3096	1-247-815-00	CARBON	220	5%	1/6W	
R3097	1-247-815-00	CARBON	220	5%	1/6W	
R3098	1-247-159-00	CARBON	15K	5%	1/4W	
R3099	1-247-713-11	CARBON	1K	5%	1/4W	
R3100	1-247-879-00	CARBON	100K	5%	1/6W	
R3101	1-247-103-00	CARBON	68	5%	1/4W	
R3102	1-247-855-00	CARBON	10K	5%	1/6W	
R3104	1-247-835-00	CARBON	1.5K	5%	1/6W	
R3105	1-247-823-00	CARBON	470	5%	1/6W	
R3108	1-247-831-00	CARBON	1K	5%	1/6W	
R3110	1-247-104-00	CARBON	75	5%	1/4W	
R3111	1-247-104-00	CARBON	75	5%	1/4W	
R3112	1-247-104-00	CARBON	75	5%	1/4W	
R3113	1-247-819-00	CARBON	330	5%	1/6W	
R3115	1-247-855-00	CARBON	10K	5%	1/6W	
R3116	1-247-887-00	CARBON	220K	5%	1/6W	
R3117	1-247-887-00	CARBON	220K	5%	1/6W	
R3118	1-247-863-00	CARBON	22K	5%	1/6W	
R3119	1-247-871-00	CARBON	47K	5%	1/6W	
R3120	1-247-871-00	CARBON	47K	5%	1/6W	
R3121	1-247-863-00	CARBON	22K	5%	1/6W	
R3122	1-247-855-00	CARBON	10K	5%	1/6W	
R3123	1-247-115-00	CARBON	220	5%	1/4W	
R3124	1-247-700-11	CARBON	100	5%	1/4W	
R3125	1-246-463-00	CARBON	390	5%	1/4W	
R3126	1-247-893-00	CARBON	390K	5%	1/6W	
R3127	1-247-104-00	CARBON	75	5%	1/4W	
R3128	1-247-104-00	CARBON	75	5%	1/4W	
R3129	1-247-893-00	CARBON	390K	5%	1/6W	
R3130	1-247-863-00	CARBON	22K	5%	1/6W	
R3131	1-247-725-11	CARBON	10K	5%	1/4W	
R3132	1-247-893-00	CARBON	390K	5%	1/6W	
R3133	1-247-104-00	CARBON	75	5%	1/4W	
R3134	1-247-879-00	CARBON	100K	5%	1/6W	
R3135	1-247-879-00	CARBON	100K	5%	1/6W	
R3136	1-247-831-00	CARBON	1K	5%	1/6W	
R3137	1-247-831-00	CARBON	1K	5%	1/6W	
R3151	1-247-855-00	CARBON	10K	5%	1/6W	
R3161	1-247-873-00	CARBON	56K	5%	1/6W	
R3162	1-247-887-00	CARBON	220K	5%	1/6W	
R3163	1-247-887-00	CARBON	220K	5%	1/6W	
R3164	1-247-179-00	CARBON	100K	5%	1/4W	
R3165	1-247-873-00	CARBON	56K	5%	1/6W	
R3166	1-247-901-00	CARBON	820K	5%	1/6W	
R3167	1-247-143-00	CARBON	3.3K	5%	1/4W	
R3168	1-247-143-00	CARBON	3.3K	5%	1/4W	
R3169	1-246-543-00	CARBON	820K	5%	1/4W	
R3170	1-247-879-00	CARBON	100K	5%	1/6W	
R3171	1-247-873-00	CARBON	56K	5%	1/6W	
R3172	1-247-725-11	CARBON	10K	5%	1/4W	
R3173	1-247-725-11	CARBON	10K	5%	1/4W	
R3174	1-246-507-00	CARBON	27K	5%	1/4W	
R3175	1-246-507-00	CARBON	27K	5%	1/4W	
R3176	1-247-149-00	CARBON	5.6K	5%	1/4W	
R3177	1-247-149-00	CARBON	5.6K	5%	1/4W	
R3178	1-247-831-00	CARBON	1K	5%	1/6W	
R3179	1-247-871-00	CARBON	47K	5%	1/6W	
R3180	1-247-871-00	CARBON	47K	5%	1/6W	
R3181	1-247-805-00	CARBON	82	5%	1/6W	
R3182	1-247-787-00	CARBON	15	5%	1/6W	
R3183	1-247-787-00	CARBON	15	5%	1/6W	
R3184	1-246-463-00	CARBON	390	5%	1/4W	

Ref.No.	Part No.	Description				Remark
R3185	1-247-875-00	CARBON	68K	5%	1/6W	
R3186	1-247-849-00	CARBON	5.6K	5%	1/6W	
R3187	1-247-119-00	CARBON	330	5%	1/4W	
R3188	1-247-143-00	CARBON	3.3K	5%	1/4W	
R3189	1-247-143-00	CARBON	3.3K	5%	1/4W	
R3190	1-247-797-00	CARBON	39	5%	1/6W	
		SWITCH				
S3000	1-553-651-00	SWITCH, SLIDE				
S3001	1-552-774-00	SWITCH, PUSH				
S3002	1-552-774-00	SWITCH, PUSH				
S3003	1-553-651-00	SWITCH, SLIDE				
		CONNECTOR				
U1	*1-564-353-00	PLUG, CONNECTOR (2.5MM) 2P				
U2	*1-564-354-21	PLUG, CONNECTOR (2.5MM) 3P				
U3	*1-564-447-31	PLUG, CONNECTOR (2.5MM) 11P				
U4	*1-564-354-00	PLUG, CONNECTOR (2.5MM) 3P				
U5	*1-564-442-11	PLUG, CONNECTOR (2.5MM) 6P				
U6	*1-564-353-00	PLUG, CONNECTOR (2.5MM) 2P				
U7	*1-564-451-11	PLUG, CONNECTOR (2.5MM) 3P				
U8	*1-564-454-31	PLUG, CONNECTOR (2.5MM) 6P				
U9	*1-564-453-11	PLUG, CONNECTOR (2.5MM) 5P				
U10	*1-564-440-11	PLUG, CONNECTOR (2.5MM) 4P				
U11	*1-564-441-11	PLUG, CONNECTOR (2.5MM) 5P				
U12	*1-564-440-11	PLUG, CONNECTOR (2.5MM) 4P				
U13	*1-564-354-00	PLUG, CONNECTOR (2.5MM) 3P				
**********						
	*A-1386-022-A	X BOARD, COMPLETE				
		**********				
		CAPACITOR				
C1101	1-123-318-00	ELECT	33MF	20%	16V	
C1102	1-123-356-00	ELECT	10MF	20%	16V	
C1103	1-123-318-00	ELECT	33MF	20%	16V	
C1104	1-123-356-00	ELECT	10MF	20%	16V	
C1105	1-102-074-00	CERAMIC	0.001MF	10%	50V	
C1106	1-123-356-00	ELECT	10MF	20%	16V	
C1107	1-123-356-00	ELECT	10MF	20%	16V	
C1108	1-102-074-00	CERAMIC	0.001MF	10%	50V	
C1109	1-106-196-00	MYLAR	0.01MF	10%	100V	
C1110	1-123-380-00	ELECT	1MF	20%	50V	
C1111	1-106-212-00	MYLAR	0.047MF	10%	100V	
C1112	1-106-196-00	MYLAR	0.01MF	10%	100V	
C1113	1-123-382-00	ELECT	3.3MF	20%	50V	
C1114	1-123-380-00	ELECT	1MF	20%	50V	
C1115	1-130-275-00	FILM	0.0012MF	5%	100V	
C1116	1-123-380-00	ELECT	1MF	20%	50V	
C1117	1-123-380-00	ELECT	1MF	20%	50V	
C1118	1-123-321-00	ELECT	220MF	20%	16V	
C1119	1-106-172-00	MYLAR	0.001MF	10%	100V	
C1120	1-106-188-00	MYLAR	0.0047MF	10%	100V	

Ref.No.	Part No.	Description			Remark
C1121	1-102-112-00	CERAMIC	330PF	10%	50V
C1122	1-123-369-00	ELECT	4.7MF	20%	25V
C1123	1-123-380-00	ELECT	1MF	20%	50V
C1124	1-123-380-00	ELECT	1MF	20%	50V
C1125	1-123-332-00	ELECT	47MF	20%	16V
C1126	1-123-380-00	ELECT	1MF	20%	50V
C1127	1-123-356-00	ELECT	10MF	20%	16V
C1128	1-106-176-00	MYLAR	0.0015MF	10%	100V
C1129	1-106-176-00	MYLAR	0.0015MF	10%	100V
C1130	1-123-380-00	ELECT	1MF	20%	50V
C1131	1-131-345-00	TANTALUM	0.47MF	10%	35V
C1132	1-123-356-00	ELECT	10MF	20%	16V
C1133	1-123-318-00	ELECT	33MF	20%	16V
C1134	1-130-301-00	FILM	0.015MF	5%	100V
C1135	1-123-323-00	ELECT	470MF	20%	16V
C1136	1-123-332-00	ELECT	47MF	20%	16V
C1137	1-123-332-00	ELECT	47MF	20%	16V
C1148	1-123-308-00	ELECT	220MF	20%	10V
C1149	1-123-381-00	ELECT	2.2MF	20%	50V
C1150	1-123-381-00	ELECT	2.2MF	20%	50V
C1151	1-123-369-00	ELECT	4.7MF	20%	25V
C1152	1-123-369-00	ELECT	4.7MF	20%	25V
C1153	1-101-004-00	CERAMIC	0.01MF		50V
C1154	1-101-004-00	CERAMIC	0.01MF		50V
C1155	1-101-004-00	CERAMIC	0.01MF		50V
C1156	1-101-004-00	CERAMIC	0.01MF		50V
C1157	1-124-556-11	ELECT	2200MF	20%	16V
C1160	1-106-212-00	MYLAR	0.047MF	10%	100V
C1161	1-106-172-00	MYLAR	0.001MF	10%	100V
C1162	1-106-172-00	MYLAR	0.001MF	10%	100V
C1163	1-106-212-00	MYLAR	0.047MF	10%	100V
C1164	1-123-330-00	ELECT	22MF	20%	25V
C1165	1-123-380-00	ELECT	1MF	20%	50V
C1166	1-102-824-00	CERAMIC	470PF	5%	50V
C1167	1-123-380-00	ELECT	1MF	20%	50V
C1168	1-102-824-00	CERAMIC	470PF	5%	50V
C1169	1-123-356-00	ELECT	10MF	20%	16V
C1170	1-123-360-00	ELECT	100MF	20%	50V
C1171	1-124-607-11	ELECT	2200MF	20%	50V
C1172	1-123-346-00	ELECT	220MF	20%	35V
C1174	1-106-208-00	MYLAR	0.033MF	10%	100V
C1175	1-123-364-00	ELECT	1000MF	20%	50V
C1176	1-123-359-00	ELECT	47MF	20%	35V
C1177	1-106-212-00	MYLAR	0.047MF	10%	100V
C1178	1-106-212-00	MYLAR	0.047MF	10%	100V
C1179	1-123-359-00	ELECT	47MF	20%	35V
C1180	1-123-364-00	ELECT	1000MF	20%	50V
C1181	1-106-208-00	MYLAR	0.033MF	10%	100V
C1183	1-123-346-00	ELECT	220MF	20%	35V
C1184	1-123-356-00	ELECT	10MF	20%	16V
C1185	1-123-380-00	ELECT	1MF	20%	50V
C1186	1-123-380-00	ELECT	1MF	20%	50V
C1187	1-123-380-00	ELECT	1MF	20%	50V

X

Ref.No.	Part No.	Description				Remark
C1188	1-123-380-00	ELECT	1MF	20%	50V	
C1189	1-102-074-00	CERAMIC	0.001MF	10%	50V	
C1190	1-123-333-00	ELECT	100MF	20%	16V	
C1200	1-130-281-00	FILM	0.0022MF	5%	100V	
C1201	1-131-343-00	TANTALUM	0.22MF	10%	35V	
C1202	1-131-343-00	TANTALUM	0.22MF	10%	35V	
C1203	1-130-281-00	FILM	0.0022MF	5%	100V	
C1204	1-131-345-00	TANTALUM	0.47MF	10%	35V	
C1205	1-130-309-00	FILM	0.033MF	5%	100V	
C1206	1-130-285-00	FILM	0.0033MF	5%	100V	
C1207	1-130-285-00	FILM	0.0033MF	5%	100V	
C1208	1-130-285-00	FILM	0.0033MF	5%	100V	
C1209	1-130-285-00	FILM	0.0033MF	5%	100V	
C1210	1-131-371-00	TANTALUM	10MF	10%	16V	
C1211	1-123-332-00	ELECT	47MF	20%	16V	
C1212	1-102-125-00	CERAMIC	0.0047MF	10%	50V	
C1213	1-130-297-00	FILM	0.01MF	5%	100V	
C1214	1-123-586-00	ELECT	0.1MF	20%	50V	
C1215	1-123-380-00	ELECT	1MF	20%	50V	
C1216	1-130-281-00	FILM	0.0022MF	5%	100V	
C1217	1-123-380-00	ELECT	1MF	20%	50V	
C1218	1-123-380-00	ELECT	1MF	20%	50V	
C1219	1-123-382-00	ELECT	3.3MF	20%	50V	
C1220	1-123-356-00	ELECT	10MF	20%	16V	
C1221	1-102-125-00	CERAMIC	0.0047MF	10%	50V	
C1222	1-123-380-00	ELECT	1MF	20%	50V	
C1223	1-131-368-00	TANTALUM	3.3MF	10%	16V	
C1224	1-123-369-00	ELECT	4.7MF	20%	50V	
C1225	1-123-356-00	ELECT	10MF	20%	16V	
C1299	1-108-849-00	MYLAR	0.1MF	10%	50V	

DIODE

D1101	8-719-911-19	DIODE 1SS119
D1102	8-719-911-19	DIODE 1SS119
D1103	8-719-911-19	DIODE 1SS119
D1104	8-719-911-19	DIODE 1SS119
D1105	8-719-102-74	DIODE RD6.2E-N2
D1106	8-719-102-74	DIODE RD6.2E-N2
D1299	8-719-200-02	DIODE 10E2

IC

IC1101	8-759-800-18	IC LA3375
IC1102	8-759-271-33	IC TA7133P
IC1103	8-759-145-58	IC UPC4558C
IC1104	8-759-140-66	IC UPD4066BC
IC1105	8-759-400-88	IC AN6291
IC1106	8-759-140-66	IC UPD4066BC
IC1107	8-759-907-16	IC CX10026
IC1108	8-749-943-62	IC STK-4362
IC1109	8-759-145-58	IC UPC4558C

TRANSISTOR

Q1101	8-729-245-83	TRANSISTOR 2SC2458
Q1102	8-729-245-83	TRANSISTOR 2SC2458
Q1103	8-729-245-83	TRANSISTOR 2SC2458
Q1104	8-729-204-83	TRANSISTOR 2SA1048GR
Q1105	8-729-245-83	TRANSISTOR 2SC2458
Q1106	8-729-245-83	TRANSISTOR 2SC2458
Q1107	8-729-245-83	TRANSISTOR 2SC2458
Q1108	8-729-204-83	TRANSISTOR 2SA1048GR
Q1109	8-729-245-83	TRANSISTOR 2SC2458
Q1110	8-729-245-83	TRANSISTOR 2SC2458
Q1111	8-729-204-83	TRANSISTOR 2SA1048GR
Q1112	8-729-204-83	TRANSISTOR 2SA1048GR
Q1113	8-729-245-83	TRANSISTOR 2SC2458
Q1114	8-729-245-83	TRANSISTOR 2SC2458
Q1115	8-729-245-83	TRANSISTOR 2SC2458
Q1116	8-729-245-83	TRANSISTOR 2SC2458
Q1117	8-729-245-83	TRANSISTOR 2SC2458
Q1118	8-729-245-83	TRANSISTOR 2SC2458
Q1119	8-729-245-83	TRANSISTOR 2SC2458
Q1120	8-729-245-83	TRANSISTOR 2SC2458
Q1121	8-729-378-84	TRANSISTOR 2SD788
Q1122	8-729-245-83	TRANSISTOR 2SC2458
Q1123	8-729-245-83	TRANSISTOR 2SC2458
Q1124	8-729-245-83	TRANSISTOR 2SC2458

RESISTOR

R1101	1-247-831-00	CARBON	1K	5%	1/6W	
R1102	1-247-831-00	CARBON	1K	5%	1/6W	
R1103	1-247-867-00	CARBON	33K	5%	1/6W	
R1104	1-247-819-00	CARBON	330	5%	1/6W	
R1105	1-247-837-00	CARBON	1.8K	5%	1/6W	
R1106	1-247-847-00	CARBON	4.7K	5%	1/6W	
R1107	1-247-867-00	CARBON	33K	5%	1/6W	
R1108	1-247-851-00	CARBON	6.8K	5%	1/6W	
R1109	1-247-859-00	CARBON	15K	5%	1/6W	
R1110	1-247-859-00	CARBON	15K	5%	1/6W	
R1111	1-247-849-00	CARBON	5.6K	5%	1/6W	
R1112	1-247-859-00	CARBON	15K	5%	1/6W	
R1113	1-249-421-11	CARBON	2.2K	5%	1/6W	
R1114	1-247-881-00	CARBON	120K	5%	1/6W	
R1115	1-247-863-00	CARBON	22K	5%	1/6W	
R1116	1-247-871-00	CARBON	47K	5%	1/6W	
R1117	1-247-853-00	CARBON	8.2K	5%	1/6W	
R1118	1-247-866-00	CARBON	30K	5%	1/6W	
R1119	1-247-847-00	CARBON	4.7K	5%	1/6W	
R1120	1-247-891-00	CARBON	330K	5%	1/6W	
R1121	1-247-879-00	CARBON	100K	5%	1/6W	
R1122	1-247-851-00	CARBON	6.8K	5%	1/6W	
R1123	1-247-831-00	CARBON	1K	5%	1/6W	
R1124	1-247-857-00	CARBON	12K	5%	1/6W	
R1125	1-247-855-00	CARBON	10K	5%	1/6W	
R1126	1-247-855-00	CARBON	10K	5%	1/6W	
R1127	1-247-879-00	CARBON	100K	5%	1/6W	
R1128	1-215-433-00	METAL	3.3K	1%	1/6W	

Ref.No.	Part No.	Description				Remark
R1129	1-215-433-00	METAL	3.3K	1%	1/6W	
R1130	1-247-879-00	CARBON	100K	5%	1/6W	
R1132	1-247-827-00	CARBON	680	5%	1/6W	
R1133	1-247-855-00	CARBON	10K	5%	1/6W	
R1134	1-247-855-00	CARBON	10K	5%	1/6W	
R1135	1-247-843-00	CARBON	3.3K	5%	1/6W	
R1136	1-247-803-00	CARBON	68	5%	1/6W	
R1137	1-247-835-00	CARBON	1.5K	5%	1/6W	
R1138	1-247-819-00	CARBON	330	5%	1/6W	
R1139	1-247-861-00	CARBON	18K	5%	1/6W	
R1140	1-247-851-00	CARBON	6.8K	5%	1/6W	
R1141	1-247-871-00	CARBON	47K	5%	1/6W	
R1142	1-247-871-00	CARBON	47K	5%	1/6W	
R1143	1-247-871-00	CARBON	47K	5%	1/6W	
R1144	1-247-843-00	CARBON	3.3K	5%	1/6W	
R1145	1-247-143-00	CARBON	3.3K	5%	1/4W	
R1146	1-247-851-00	CARBON	6.8K	5%	1/6W	
R1147	1-247-861-00	CARBON	18K	5%	1/6W	
R1148	1-247-847-00	CARBON	4.7K	5%	1/6W	
R1149	1-247-863-00	CARBON	22K	5%	1/6W	
R1150	1-215-486-00	METAL	510K	1%	1/6W	
R1151	1-214-785-00	METAL	220K	1%	1/4W	
R1152	1-215-469-00	METAL	100K	1%	1/6W	
R1153	1-214-777-00	METAL	100K	1%	1/4W	
R1154	1-214-785-00	METAL	220K	1%	1/4W	
R1155	1-215-493-00	METAL	1M	1%	1/6W	
R1156	1-215-493-00	METAL	1M	1%	1/6W	
R1157	1-246-529-00	CARBON	220K	5%	1/4W	
R1158	1-247-879-00	CARBON	100K	5%	1/6W	
R1159	1-247-886-00	CARBON	200K	5%	1/6W	
R1160	1-247-115-00	CARBON	220	5%	1/4W	
R1161	1-247-863-00	CARBON	22K	5%	1/6W	
R1162	1-247-847-00	CARBON	4.7K	5%	1/6W	
R1163	1-247-851-00	CARBON	6.8K	5%	1/6W	
R1164	1-247-861-00	CARBON	18K	5%	1/6W	
R1165	1-247-848-00	CARBON	5.1K	5%	1/6W	
R1166	1-247-835-00	CARBON	1.5K	5%	1/6W	
R1167	1-247-833-00	CARBON	1.2K	5%	1/6W	
R1168	1-247-847-00	CARBON	4.7K	5%	1/6W	
R1170	1-247-849-00	CARBON	5.6K	5%	1/6W	
R1172	1-247-823-00	CARBON	470	5%	1/6W	
R1173	1-247-841-00	CARBON	2.7K	5%	1/6W	
R1174	1-247-829-00	CARBON	820	5%	1/6W	
R1175	1-249-421-11	CARBON	2.2K	5%	1/6W	
R1176	1-247-815-00	CARBON	220	5%	1/6W	
R1177	1-247-863-00	CARBON	22K	5%	1/6W	
R1180	1-247-855-00	CARBON	10K	5%	1/6W	
R1181	1-247-847-00	CARBON	4.7K	5%	1/6W	
R1182	1-247-838-00	CARBON	2K	5%	1/6W	
R1183	1-247-838-00	CARBON	2K	5%	1/6W	
R1184	1-247-829-00	CARBON	820	5%	1/6W	
R1185	1-247-829-00	CARBON	820	5%	1/6W	
R1186	1-247-838-00	CARBON	2K	5%	1/6W	
R1187	1-247-879-00	CARBON	100K	5%	1/6W	
R1188	1-247-855-00	CARBON	10K	5%	1/6W	
R1189	1-247-855-00	CARBON	10K	5%	1/6W	
R1190	1-247-811-00	CARBON	150	5%	1/6W	
R1191	1-247-823-00	CARBON	470	5%	1/6W	
R1192	1-247-855-00	CARBON	10K	5%	1/6W	
R1193	1-247-855-00	CARBON	10K	5%	1/6W	
R1194	1-247-855-00	CARBON	10K	5%	1/6W	
R1195	1-247-879-00	CARBON	100K	5%	1/6W	
R1196	1-247-879-00	CARBON	100K	5%	1/6W	
R1197	1-247-855-00	CARBON	10K	5%	1/6W	
R1199	1-247-879-00	CARBON	100K	5%	1/6W	
R1200	1-247-879-00	CARBON	100K	5%	1/6W	
R1203	1-247-831-00	CARBON	1K	5%	1/6W	
R1204	1-247-831-00	CARBON	1K	5%	1/6W	
R1205	1-247-831-00	CARBON	1K	5%	1/6W	
R1206	1-247-831-00	CARBON	1K	5%	1/6W	
R1207	1-247-831-00	CARBON	1K	5%	1/6W	
R1208	1-247-865-00	CARBON	27K	5%	1/6W	
R1210	1-247-847-00	CARBON	4.7K	5%	1/6W	
R1211	1-247-879-00	CARBON	100K	5%	1/6W	
R1212	1-247-847-00	CARBON	4.7K	5%	1/6W	
R1213	1-247-831-00	CARBON	1K	5%	1/6W	
R1214	1-247-879-00	CARBON	100K	5%	1/6W	
R1215	1-247-881-00	CARBON	120K	5%	1/6W	
R1216	1-247-893-00	CARBON	390K	5%	1/6W	
R1217	1-211-427-00	CARBON	100	5%	1/8W	F
R1218	1-247-825-00	CARBON	560	5%	1/6W	
R1220	1-247-859-00	CARBON	15K	5%	1/6W	
R1221	1-247-861-00	CARBON	18K	5%	1/6W	
R1222	1-211-401-00	CARBON	4.7	5%	1/8W	F
R1223	1-211-401-00	CARBON	4.7	5%	1/8W	F
R1224	1-247-831-00	CARBON	1K	5%	1/6W	
R1225	1-247-161-00	CARBON	18K	5%	1/4W	
R1226	1-247-859-00	CARBON	15K	5%	1/6W	
R1227	1-247-831-00	CARBON	1K	5%	1/6W	
R1229	1-247-825-00	CARBON	560	5%	1/6W	
R1230	1-247-879-00	CARBON	100K	5%	1/6W	
R1231	1-247-831-00	CARBON	1K	5%	1/6W	
R1232	1-247-831-00	CARBON	1K	5%	1/6W	
R1233	1-247-831-00	CARBON	1K	5%	1/6W	
R1234	1-247-831-00	CARBON	1K	5%	1/6W	
R1237	1-247-879-00	CARBON	100K	5%	1/6W	
R1241	1-247-855-00	CARBON	10K	5%	1/6W	
R1243	1-247-862-00	CARBON	20K	5%	1/6W	
R1245	1-247-867-00	CARBON	33K	5%	1/6W	
R1246	1-247-843-00	CARBON	3.3K	5%	1/6W	
R1247	1-247-885-00	CARBON	180K	5%	1/6W	
R1248	1-247-885-00	CARBON	180K	5%	1/6W	
R1249	1-247-847-00	CARBON	4.7K	5%	1/6W	
R1250	1-247-847-00	CARBON	4.7K	5%	1/6W	
R1251	1-247-863-00	CARBON	22K	5%	1/6W	
R1252	1-247-843-00	CARBON	3.3K	5%	1/6W	

Ref.No.	Part No.	Description				Remark
R1253	1-247-865-00	CARBON	27K	5%	1/6W	
R1254	1-247-847-00	CARBON	4.7K	5%	1/6W	
R1255	1-247-847-00	CARBON	4.7K	5%	1/6W	
R1256	1-247-843-00	CARBON	3.3K	5%	1/6W	
R1257	1-247-811-00	CARBON	150	5%	1/6W	
R1258	1-247-843-00	CARBON	3.3K	5%	1/6W	
R1259	1-247-869-00	CARBON	39K	5%	1/6W	
R1260	1-247-893-00	CARBON	390K	5%	1/6W	
R1261	1-247-885-00	CARBON	180K	5%	1/6W	
R1262	1-247-844-00	CARBON	3.6K	5%	1/6W	
R1263	1-247-893-00	CARBON	390K	5%	1/6W	
R1288	1-247-848-00	CARBON	5.1K	5%	1/6W	
R1289	1-247-885-00	CARBON	180K	5%	1/6W	
R1290	1-247-811-00	CARBON	150	5%	1/6W	
R1291	1-247-843-00	CARBON	3.3K	5%	1/6W	
R1292	1-247-831-00	CARBON	1K	5%	1/6W	
R1293	1-247-844-00	CARBON	3.6K	5%	1/6W	
R1294	1-247-887-00	CARBON	220K	5%	1/6W	
R1295	1-215-421-00	METAL	1K	1%	1/6W	
R1297	1-247-887-00	CARBON	220K	5%	1/6W	
R1298	1-247-777-00	CARBON	5.6	5%	1/8W	F
R1299	1-246-529-00	CARBON	220K	5%	1/4W	

VARIABLE RESISTOR

RV1101	1-228-724-00	RES, ADJ, CERAMIC CARBON	10K
RV1102	1-228-723-00	RES, ADJ, CERAMIC CARBON	4.7K
RV1103	1-228-720-00	RES, ADJ, CERAMIC CARBON	1K
RV1104	1-228-722-00	RES, ADJ, CERAMIC CARBON	3.3K
RV1106	1-228-724-00	RES, ADJ, CERAMIC CARBON	10K
RV1107	1-228-721-00	RES, ADJ, CERAMIC CARBON	2.2K
RV1108	1-228-721-00	RES, ADJ, CERAMIC CARBON	2.2K
RV1109	1-228-725-00	RES, ADJ, CERAMIC CARBON	22K
RV1110	1-228-724-00	RES, ADJ, CERAMIC CARBON	10K

TRANSFORMER

T1101	1-235-386-11	FILTER, BAND PASS
T1102	1-235-387-11	FILTER, BAND PASS
T1103	1-235-400-11	FILTER, LOW PASS (L.P.F)
T1104	1-231-726-00	FILTER, LOWPASS
T1105	1-231-726-00	FILTER, LOWPASS

CONNECTOR

X1	*1-564-353-00	PLUG, CONNECTOR (2.5MM) 2P
X2	*1-564-354-00	PLUG, CONNECTOR (2.5MM) 3P
X3	*1-508-765-00	3P PLUG (M)
X4	*1-564-440-11	PLUG, CONNECTOR (2.5MM) 4P
X5	*1-564-442-11	PLUG, CONNECTOR (2.5MM) 6P
X6	*1-564-444-11	PLUG, CONNECTOR (2.5MM) 8P
X7	*1-564-440-11	PLUG, CONNECTOR (2.5MM) 4P

Ref.No.	Part No.	Description				Remark
	*1-614-651-11	XA BOARD				
		********				
	4-309-378-00	SPACER				

CAPACITOR

C1701	1-102-117-00	CERAMIC	820PF	10%	50V
C1702	1-102-116-00	CERAMIC	680PF	10%	50V
C1703	1-123-356-00	ELECT	10MF	20%	16V
C1704	1-123-356-00	ELECT	10MF	20%	16V

DIODE

D1701	8-719-911-19	DIODE 1SS119

COIL

L1701	1-408-242-00	MICRO INDUCTOR 10MMH

TRANSISTOR

Q1701	8-729-245-83	TRANSISTOR 2SC2458
Q1702	8-729-204-83	TRANSISTOR 2SA1048GR

RESISTOR

R1701	1-249-421-11	CARBON	2.2K	5%	1/6W
R1702	1-247-855-00	CARBON	10K	5%	1/6W
R1703	1-247-847-00	CARBON	4.7K	5%	1/6W

CONNECTOR

XA1	*1-564-440-11	PLUG, CONNECTOR (2.5MM) 4P

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	*1-615-484-11	Z BOARD
		*******

JACK

J001	1-507-806-00	JACK
J002	1-507-940-21	JACK, AV
J003	1-507-940-21	JACK, AV

RESISTOR

R001	1-244-851-51	CARBON	120	5%	1/2W
R002	1-244-851-51	CARBON	120	5%	1/2W

CONNECTOR

Z1	*1-564-442-11	PLUG, CONNECTOR (2.5MM) 6P
Z2	*1-564-441-11	PLUG, CONNECTOR (2.5MM) 5P
Z3	*1-564-440-11	PLUG, CONNECTOR (2.5MM) 4P
Z4	*1-564-440-11	PLUG, CONNECTOR (2.5MM) 4P

Ref.No.	Part No.	Description			Remark
	*A-1394-058-A	V BOARD, COMPLETE			
		**********			
	*1-528-166-11	BATTERY, LITHIUM (BUTTON TYPE)			
		CAPACITOR			
C4002	1-108-849-00	MYLAR	0.1MF	10%	50V
C4003	1-102-947-00	CERAMIC	10PF	5%	50V
C4004	1-102-947-00	CERAMIC	10PF	5%	50V
C4006	1-123-307-00	ELECT	100MF	20%	6.3V
C4009	1-102-074-00	CERAMIC	0.001MF	10%	50V
C4010	1-101-006-00	CERAMIC	0.047MF		50V
C4011	1-101-006-00	CERAMIC	0.047MF		50V
C4012	1-101-006-00	CERAMIC	0.047MF		50V
C4013	1-101-006-00	CERAMIC	0.047MF		50V
C4014	1-101-006-00	CERAMIC	0.047MF		50V
C4015	1-101-006-00	CERAMIC	0.047MF		50V
C4016	1-101-006-00	CERAMIC	0.047MF		50V
C4017	1-125-339-00	DOUBLE LAYERS	1F		5.5V
C4018	1-108-614-91	MYLAR	0.001MF	10%	100V
C4022	1-131-382-00	TANTALUM	6.8MF	10%	6.3V
C4023	1-101-006-00	CERAMIC	0.047MF		50V
C4024	1-101-006-00	CERAMIC	0.047MF		50V
C4025	1-108-845-00	MYLAR	0.047MF	10%	50V
C4026	1-123-607-00	ELECT	0.1MF	20%	50V
C4027	1-124-445-00	ELECT	100MF	20%	16V
C4030	1-123-380-00	ELECT	1MF	20%	50V
C4102	1-123-298-00	ELECT	470MF	20%	6.3V
C4103	1-101-006-00	CERAMIC	0.047MF		50V
C4104	1-102-973-00	CERAMIC	100PF	5%	50V
C4201	1-124-445-00	ELECT	100MF	20%	16V
C4202	1-101-006-00	CERAMIC	0.047MF		50V
C4203	1-102-074-00	CERAMIC	0.001MF	10%	50V
C4205	1-108-614-91	MYLAR	0.001MF	10%	100V
C4206	1-108-630-91	MYLAR	0.022MF	10%	100V
C4207	1-102-978-00	CERAMIC	220PF	5%	50V
C4208	1-102-074-00	CERAMIC	0.001MF	10%	50V
C4209	1-102-880-00	CERAMIC	15PF	5%	50V
C4210	1-101-999-00	CERAMIC	10PF	0.5PF	50V
C4211	1-102-074-00	CERAMIC	0.001MF	10%	50V
C4212	1-102-074-00	CERAMIC	0.001MF	10%	50V
C4213	1-102-937-00	CERAMIC	4PF	0.5PF	50V
C4214	1-101-880-00	CERAMIC	47PF	5%	50V
C4216	1-108-614-91	MYLAR	0.001MF	10%	100V
C4217	1-108-614-91	MYLAR	0.001MF	10%	100V
C4302	1-108-849-00	MYLAR	0.1MF	10%	50V
C4303	1-123-318-00	ELECT	33MF	20%	16V
C4304	1-124-445-00	ELECT	100MF	20%	16V
C4305	1-124-445-00	ELECT	100MF	20%	16V
C4306	1-108-614-91	MYLAR	0.001MF	10%	100V
C4307	1-108-849-00	MYLAR	0.1MF	10%	50V
C4308	1-123-318-00	ELECT	33MF	20%	16V
C4309	1-124-445-00	ELECT	100MF	20%	16V
C4311	1-123-318-00	ELECT	33MF	20%	16V
C4312	1-106-196-00	MYLAR	0.01MF	10%	100V
C4314	1-123-356-00	ELECT	10MF	20%	25V
C4315	1-101-006-00	CERAMIC	0.047MF		50V
C4316	1-101-006-00	CERAMIC	0.047MF		50V
C4318	1-101-006-00	CERAMIC	0.047MF		50V
C4319	1-101-006-00	CERAMIC	0.047MF		50V
C4321	1-124-445-00	ELECT	100MF	20%	16V
C4322	1-101-006-00	CERAMIC	0.047MF		50V
C4323	1-102-947-00	CERAMIC	10PF	5%	50V
C4324	1-102-947-00	CERAMIC	10PF	5%	50V
C4325	1-102-947-00	CERAMIC	10PF	5%	50V
C4342	1-101-006-00	CERAMIC	0.047MF		50V
C4343	1-101-006-00	CERAMIC	0.047MF		50V
C4344	1-101-006-00	CERAMIC	0.047MF		50V
C4345	1-101-006-00	CERAMIC	0.047MF		50V
C4346	1-101-006-00	CERAMIC	0.047MF		50V
C4347	1-101-006-00	CERAMIC	0.047MF		50V
C4348	1-101-006-00	CERAMIC	0.047MF		50V
C4349	1-101-006-00	CERAMIC	0.047MF		50V
C4350	1-101-006-00	CERAMIC	0.047MF		50V
C4351	1-101-006-00	CERAMIC	0.047MF		50V
C4352	1-101-006-00	CERAMIC	0.047MF		50V
C4353	1-101-006-00	CERAMIC	0.047MF		50V
C4354	1-101-006-00	CERAMIC	0.047MF		50V
C4355	1-101-006-00	CERAMIC	0.047MF		50V
C4356	1-101-006-00	CERAMIC	0.047MF		50V
C4357	1-101-006-00	CERAMIC	0.047MF		50V
C4358	1-101-006-00	CERAMIC	0.047MF		50V
C4359	1-101-006-00	CERAMIC	0.047MF		50V
C4360	1-101-006-00	CERAMIC	0.047MF		50V
C4361	1-101-006-00	CERAMIC	0.047MF		50V
C4362	1-101-006-00	CERAMIC	0.047MF		50V
C4363	1-101-006-00	CERAMIC	0.047MF		50V
C4364	1-101-006-00	CERAMIC	0.047MF		50V
C4365	1-101-006-00	CERAMIC	0.047MF		50V
C4366	1-124-445-00	ELECT	100MF	20%	16V
C4367	1-124-445-00	ELECT	100MF	20%	16V
C4368	1-124-445-00	ELECT	100MF	20%	16V
C4369	1-101-006-00	CERAMIC	0.047MF		50V
C4370	1-101-006-00	CERAMIC	0.047MF		50V
C4374	1-102-074-00	CERAMIC	0.001MF	10%	50V
C4375	1-102-074-00	CERAMIC	0.001MF	10%	50V
C4376	1-102-074-00	CERAMIC	0.001MF	10%	50V
C4377	1-123-332-00	ELECT	47MF	20%	16V
C4378	1-102-074-00	CERAMIC	0.001MF	10%	50V
C4380	1-102-074-00	CERAMIC	0.001MF	10%	50V
C4382	1-101-006-00	CERAMIC	0.047MF		50V
C4383	1-101-006-00	CERAMIC	0.047MF		50V
C4384	1-123-332-00	ELECT	47MF	20%	16V
C4387	1-101-006-00	CERAMIC	0.047MF		50V
C4388	1-101-006-00	CERAMIC	0.047MF		50V
C4389	1-102-121-00	CERAMIC	0.0022MF	10%	50V

Ref.No.	Part No.	Description	Remark
C4390	1-108-849-00	MYLAR 0.1MF 10% 50V	
		DIODE	
D4002	8-719-108-26	DIODE 1SS101	
D4003	8-719-911-19	DIODE 1SS119	
D4006	8-719-911-55	DIODE U05G	
D4011	8-719-911-19	DIODE 1SS119	
D4012	8-719-911-19	DIODE 1SS119	
D4013	8-719-108-26	DIODE 1SS101	
D4014	8-719-911-19	DIODE 1SS119	
D4015	8-719-911-19	DIODE 1SS119	
D4016	8-719-911-19	DIODE 1SS119	
D4040	8-719-102-68	DIODE RD5.1E-N2	
D4042	8-719-911-19	DIODE 1SS119	
D4043	8-719-102-73	DIODE RD6.2E-N1	
D4044	8-719-911-19	DIODE 1SS119	
D4201	8-719-911-19	DIODE 1SS119	
D4202	8-713-220-00	DIODE 1T32-2	
D4204	8-719-911-19	DIODE 1SS119	
D4205	8-719-911-19	DIODE 1SS119	
D4301	8-719-102-64	DIODE RD4.7E-N1	
D4303	8-719-911-19	DIODE 1SS119	
		IC	
IC4001	8-759-104-29	IC UPD78C06AG-013-36	
IC4002	8-759-200-23	IC TC40H139P	
IC4003	8-759-200-23	IC TC40H139P	
IC4005	8-759-913-92	IC MB8416-20LP	
IC4006	8-759-913-92	IC MB8416-20LP	
IC4007	8-759-913-92	IC MB8416-20LP	
IC4008	8-759-303-26	IC HN613128P-G25	
IC4009	8-759-000-02	IC MC14049UBCP	
IC4010	8-759-240-11	IC TC4011BP	
IC4011	8-759-900-02	IC SN74LS02N	
IC4012	8-759-900-04	IC SN74LS04N	
IC4013	8-759-240-11	IC TC4011BP	
IC4014	8-759-240-69	IC TC4069UBP	
IC4015	8-759-220-00	IC TC40H000P	
IC4016	8-759-913-92	IC MB8416-20LP	
IC4017	8-759-913-42	IC PST520C-2	
IC4101	8-759-920-12	IC TMS9128NL	
IC4102	8-759-909-04	IC TMS4416-15NL	
IC4103	8-759-909-04	IC TMS4416-15NL	
IC4201	8-759-250-81	IC TC5081AP	
IC4202	8-759-900-76	IC SN74LS76AN	
IC4203	8-759-901-63	IC SN74LS163AN	
IC4204	8-759-901-63	IC SN74LS163AN	
IC4205	8-759-901-63	IC SN74LS163AN	
IC4301	8-759-140-66	IC UPD4066BC	
IC4302	8-752-006-00	IC CX20060	
IC4303	8-759-132-40	IC UPC324C	
IC4304	8-752-006-00	IC CX20060	
IC4305	8-759-951-07	IC SN75107AN	

Ref.No.	Part No.	Description	Remark
		COIL	
L4001	1-407-695-00	MICRO INDUCTOR 15UH	
L4002	1-407-695-00	MICRO INDUCTOR 15UH	
L4003	1-407-695-00	MICRO INDUCTOR 15UH	
L4004	1-407-695-00	MICRO INDUCTOR 15UH	
L4005	1-407-695-00	MICRO INDUCTOR 15UH	
L4006	1-408-444-11	MICRO INDUCTOR 15UH	
L4007	1-408-444-11	MICRO INDUCTOR 15UH	
L4101	1-407-697-00	MICRO INDUCTOR 22UH	
L4102	1-407-697-00	MICRO INDUCTOR 22UH	
L4201	1-409-372-00	COIL, TRAP	
		TRANSISTOR	
Q4001	8-729-245-83	TRANSISTOR 2SC2458	
Q4007	8-729-900-89	TRANSISTOR DTC144ES	
Q4008	8-729-204-83	TRANSISTOR 2SA1048GR	
Q4009	8-729-603-50	TRANSISTOR 2SC403SP	
Q4010	8-729-245-83	TRANSISTOR 2SC2458	
Q4011	8-729-245-83	TRANSISTOR 2SC2458	
Q4012	8-729-900-89	TRANSISTOR DTC144ES	
Q4013	8-729-900-89	TRANSISTOR DTC144ES	
Q4014	8-729-900-89	TRANSISTOR DTC144ES	
Q4040	8-729-245-83	TRANSISTOR 2SC2458	
Q4045	8-729-204-83	TRANSISTOR 2SA1048GR	
Q4046	8-729-245-83	TRANSISTOR 2SC2458	
Q4048	8-729-204-83	TRANSISTOR 2SA1048GR	
Q4101	8-729-245-83	TRANSISTOR 2SC2458	
Q4102	8-729-245-83	TRANSISTOR 2SC2458	
Q4201	8-729-245-83	TRANSISTOR 2SC2458	
Q4202	8-729-245-83	TRANSISTOR 2SC2458	
Q4203	8-729-603-50	TRANSISTOR 2SC403SP	
Q4204	8-729-603-50	TRANSISTOR 2SC403SP	
Q4205	8-729-603-50	TRANSISTOR 2SC403SP	
Q4302	8-729-204-83	TRANSISTOR 2SA1048GR	
Q4303	8-729-245-83	TRANSISTOR 2SC2458	
Q4304	8-729-245-83	TRANSISTOR 2SC2458	
Q4305	8-729-204-83	TRANSISTOR 2SA1048GR	
Q4306	8-729-204-83	TRANSISTOR 2SA1048GR	
Q4307	8-729-204-83	TRANSISTOR 2SA1048GR	
Q4309	8-729-204-83	TRANSISTOR 2SA1048GR	
Q4310	8-729-245-83	TRANSISTOR 2SC2458	
Q4311	8-729-245-83	TRANSISTOR 2SC2458	
Q4312	8-729-204-83	TRANSISTOR 2SA1048GR	
Q4314	8-729-204-83	TRANSISTOR 2SA1048GR	
Q4315	8-729-245-83	TRANSISTOR 2SC2458	
Q4316	8-729-245-83	TRANSISTOR 2SC2458	
Q4317	8-729-204-83	TRANSISTOR 2SA1048GR	
Q4318	8-729-204-83	TRANSISTOR 2SA1048GR	
		RESISTOR	
R4002	1-247-807-00	CARBON 100 5% 1/6W	
R4003	1-249-421-11	CARBON 2.2K 5% 1/6W	
R4010	1-247-855-00	CARBON 10K 5% 1/6W	

Ref.No.	Part No.	Description				Remark
R4011	1-247-855-00	CARBON	10K	5%	1/6W	
R4012	1-247-855-00	CARBON	10K	5%	1/6W	
R4013	1-247-855-00	CARBON	10K	5%	1/6W	
R4014	1-247-855-00	CARBON	10K	5%	1/6W	
R4015	1-247-855-00	CARBON	10K	5%	1/6W	
R4016	1-247-855-00	CARBON	10K	5%	1/6W	
R4017	1-247-855-00	CARBON	10K	5%	1/6W	
R4019	1-247-855-00	CARBON	10K	5%	1/6W	
R4021	1-247-855-00	CARBON	10K	5%	1/6W	
R4024	1-247-855-00	CARBON	10K	5%	1/6W	
R4025	1-247-871-00	CARBON	47K	5%	1/6W	
R4026	1-247-815-00	CARBON	220	5%	1/6W	
R4027	1-247-827-00	CARBON	680	5%	1/6W	
R4028	1-247-815-00	CARBON	220	5%	1/6W	
R4029	1-247-827-00	CARBON	680	5%	1/6W	
R4039	1-247-210-00	CARBON	56	5%	1/2W	
R4040	1-247-855-00	CARBON	10K	5%	1/6W	
R4041	1-247-819-00	CARBON	330	5%	1/6W	
R4043	1-247-871-00	CARBON	47K	5%	1/6W	
R4045	1-247-855-00	CARBON	10K	5%	1/6W	
R4048	1-247-807-00	CARBON	100	5%	1/6W	
R4049	1-247-847-00	CARBON	4.7K	5%	1/6W	
R4050	1-247-855-00	CARBON	10K	5%	1/6W	
R4051	1-247-819-00	CARBON	330	5%	1/6W	
R4052	1-247-859-00	CARBON	15K	5%	1/6W	
R4053	1-247-855-00	CARBON	10K	5%	1/6W	
R4056	1-247-819-00	CARBON	330	5%	1/6W	
R4057	1-247-847-00	CARBON	4.7K	5%	1/6W	
R4058	1-247-855-00	CARBON	10K	5%	1/6W	
R4061	1-247-831-00	CARBON	1K	5%	1/6W	
R4062	1-247-831-00	CARBON	1K	5%	1/6W	
R4063	1-249-421-11	CARBON	2.2K	5%	1/6W	
R4064	1-247-875-00	CARBON	68K	5%	1/6W	
R4065	1-247-897-00	CARBON	560K	5%	1/6W	
R4066	1-214-970-00	METAL	1.8M	1%	1/4W	
R4068	1-247-855-00	CARBON	10K	5%	1/6W	
R4069	1-247-807-00	CARBON	100	5%	1/6W	
R4070	1-247-823-00	CARBON	470	5%	1/6W	
R4071	1-247-879-00	CARBON	100K	5%	1/6W	
R4072	1-247-807-00	CARBON	100	5%	1/6W	
R4073	1-247-823-00	CARBON	470	5%	1/6W	
R4077	1-247-831-00	CARBON	1K	5%	1/6W	
R4078	1-247-879-00	CARBON	100K	5%	1/6W	
R4079	1-247-855-00	CARBON	10K	5%	1/6W	
R4080	1-247-809-00	CARBON	120	5%	1/6W	
R4081	1-247-855-00	CARBON	10K	5%	1/6W	
R4082	1-247-855-00	CARBON	10K	5%	1/6W	
R4083	1-247-855-00	CARBON	10K	5%	1/6W	
R4084	1-247-855-00	CARBON	10K	5%	1/6W	
R4085	1-247-855-00	CARBON	10K	5%	1/6W	
R4086	1-247-855-00	CARBON	10K	5%	1/6W	
R4088	1-247-885-00	CARBON	180K	5%	1/6W	
R4090	1-247-855-00	CARBON	10K	5%	1/6W	
R4091	1-247-829-00	CARBON	820	5%	1/6W	
R4092	1-247-843-00	CARBON	3.3K	5%	1/6W	
R4101	1-247-847-00	CARBON	4.7K	5%	1/6W	
R4104	1-247-871-00	CARBON	47K	5%	1/6W	
R4105	1-247-871-00	CARBON	47K	5%	1/6W	
R4106	1-249-421-11	CARBON	2.2K	5%	1/6W	
R4107	1-247-841-00	CARBON	2.7K	5%	1/6W	
R4108	1-247-865-00	CARBON	27K	5%	1/6W	
R4201	1-247-831-00	CARBON	1K	5%	1/6W	
R4202	1-249-421-11	CARBON	2.2K	5%	1/6W	
R4203	1-247-843-00	CARBON	3.3K	5%	1/6W	
R4204	1-247-849-00	CARBON	5.6K	5%	1/6W	
R4205	1-247-873-00	CARBON	56K	5%	1/6W	
R4206	1-247-799-00	CARBON	47	5%	1/6W	
R4207	1-247-817-00	CARBON	270	5%	1/6W	
R4208	1-247-862-00	CARBON	20K	5%	1/6W	
R4209	1-247-855-00	CARBON	10K	5%	1/6W	
R4210	1-247-863-00	CARBON	22K	5%	1/6W	
R4211	1-247-865-00	CARBON	27K	5%	1/6W	
R4212	1-247-823-00	CARBON	470	5%	1/6W	
R4213	1-247-819-00	CARBON	330	5%	1/6W	
R4214	1-247-855-00	CARBON	10K	5%	1/6W	
R4215	1-247-843-00	CARBON	3.3K	5%	1/6W	
R4217	1-247-823-00	CARBON	470	5%	1/6W	
R4218	1-247-847-00	CARBON	4.7K	5%	1/6W	
R4220	1-247-819-00	CARBON	330	5%	1/6W	
R4301	1-247-823-00	CARBON	470	5%	1/6W	
R4302	1-247-807-00	CARBON	100	5%	1/6W	
R4304	1-247-847-00	CARBON	4.7K	5%	1/6W	
R4305	1-247-843-00	CARBON	3.3K	5%	1/6W	
R4306	1-247-847-00	CARBON	4.7K	5%	1/6W	
R4308	1-247-853-00	CARBON	8.2K	5%	1/6W	
R4309	1-247-807-00	CARBON	100	5%	1/6W	
R4310	1-247-841-00	CARBON	2.7K	5%	1/6W	
R4311	1-247-853-00	CARBON	8.2K	5%	1/6W	
R4312	1-247-833-00	CARBON	1.2K	5%	1/6W	
R4313	1-247-847-00	CARBON	4.7K	5%	1/6W	
R4314	1-247-833-00	CARBON	1.2K	5%	1/6W	
R4315	1-247-859-00	CARBON	15K	5%	1/6W	
R4316	1-247-843-00	CARBON	3.3K	5%	1/6W	
R4317	1-247-807-00	CARBON	100	5%	1/6W	
R4318	1-247-833-00	CARBON	1.2K	5%	1/6W	
R4319	1-247-847-00	CARBON	4.7K	5%	1/6W	
R4320	1-247-847-00	CARBON	4.7K	5%	1/6W	
R4322	1-247-823-00	CARBON	470	5%	1/6W	
R4323	1-247-807-00	CARBON	100	5%	1/6W	
R4324	1-247-829-00	CARBON	820	5%	1/6W	
R4325	1-249-421-11	CARBON	2.2K	5%	1/6W	
R4326	1-247-827-00	CARBON	680	5%	1/6W	
R4327	1-247-823-00	CARBON	470	5%	1/6W	
R4328	1-247-823-00	CARBON	470	5%	1/6W	
R4329	1-247-847-00	CARBON	4.7K	5%	1/6W	
R4330	1-247-807-00	CARBON	100	5%	1/6W	

Ref.No.	Part No.	Description				Remark
R4331	1-247-823-00	CARBON	470	5%	1/6W	
R4332	1-247-807-00	CARBON	100	5%	1/6W	
R4338	1-247-853-00	CARBON	8.2K	5%	1/6W	
R4339	1-247-807-00	CARBON	100	5%	1/6W	
R4340	1-247-841-00	CARBON	2.7K	5%	1/6W	
R4341	1-247-853-00	CARBON	8.2K	5%	1/6W	
R4342	1-247-833-00	CARBON	1.2K	5%	1/6W	
R4343	1-247-847-00	CARBON	4.7K	5%	1/6W	
R4344	1-247-859-00	CARBON	15K	5%	1/6W	
R4345	1-247-843-00	CARBON	3.3K	5%	1/6W	
R4346	1-247-807-00	CARBON	100	5%	1/6W	
R4347	1-247-833-00	CARBON	1.2K	5%	1/6W	
R4348	1-247-847-00	CARBON	4.7K	5%	1/6W	
R4349	1-247-847-00	CARBON	4.7K	5%	1/6W	
R4350	1-247-823-00	CARBON	470	5%	1/6W	
R4352	1-247-807-00	CARBON	100	5%	1/6W	
R4353	1-247-823-00	CARBON	470	5%	1/6W	
R4354	1-247-807-00	CARBON	100	5%	1/6W	
R4361	1-247-833-00	CARBON	1.2K	5%	1/6W	
R4362	1-247-847-00	CARBON	4.7K	5%	1/6W	
R4363	1-247-859-00	CARBON	15K	5%	1/6W	
R4364	1-247-807-00	CARBON	100	5%	1/6W	
R4365	1-247-847-00	CARBON	4.7K	5%	1/6W	
R4366	1-247-853-00	CARBON	8.2K	5%	1/6W	
R4367	1-247-833-00	CARBON	1.2K	5%	1/6W	
R4368	1-247-833-00	CARBON	1.2K	5%	1/6W	
R4369	1-247-847-00	CARBON	4.7K	5%	1/6W	
R4370	1-247-847-00	CARBON	4.7K	5%	1/6W	
R4371	1-247-847-00	CARBON	4.7K	5%	1/6W	
R4372	1-247-843-00	CARBON	3.3K	5%	1/6W	
R4377	1-247-831-00	CARBON	1K	5%	1/6W	
R4378	1-247-841-00	CARBON	2.7K	5%	1/6W	
R4380	1-247-805-00	CARBON	82	5%	1/6W	
R4382	1-247-843-00	CARBON	3.3K	5%	1/6W	
R4383	1-247-833-00	CARBON	1.2K	5%	1/6W	
R4384	1-247-831-00	CARBON	1K	5%	1/6W	
R4385	1-247-855-00	CARBON	10K	5%	1/6W	
R4387	1-247-819-00	CARBON	330	5%	1/6W	
R4388	1-247-855-00	CARBON	10K	5%	1/6W	
R4389	1-247-859-00	CARBON	15K	5%	1/6W	
R4390	1-247-861-00	CARBON	18K	5%	1/6W	
R4391	1-247-847-00	CARBON	4.7K	5%	1/6W	
R4393	1-247-827-00	CARBON	680	5%	1/6W	

VARIABLE RESISTOR

RV4301	1-228-724-00	RES, ADJ, CERAMIC CARBON	10K
RV4302	1-228-720-00	RES, ADJ, CERAMIC CARBON	1K
RV4303	1-228-724-00	RES, ADJ, CERAMIC CARBON	10K
RV4304	1-228-720-00	RES, ADJ, CERAMIC CARBON	1K
RV4305	1-228-720-00	RES, ADJ, CERAMIC CARBON	1K
RV4306	1-228-721-00	RES, ADJ, CERAMIC CARBON	2.2K

Ref.No.	Part No.	Description	Remark
		CONNECTOR	
V1	*1-564-440-11	PLUG, CONNECTOR (2.5MM) 4P	
V2	*1-564-446-11	PLUG, CONNECTOR (2.5MM) 10P	
V3	*1-508-766-00	4P PLUG (M)	
V4	*1-564-353-00	PLUG, CONNECTOR (2.5MM) 2P	
V5	*1-564-442-11	PLUG, CONNECTOR (2.5MM) 6P	
V6	*1-564-440-11	PLUG, CONNECTOR (2.5MM) 4P	
V7	*1-564-354-00	PLUG, CONNECTOR (2.5MM) 3P	
V8	*1-564-441-11	PLUG, CONNECTOR (2.5MM) 5P	
		OSCILLATOR	
X4001	1-567-192-11	OSCILLATOR, CERAMIC	
		MISCELLANEOUS	
		**********	
	⚠1-230-212-11	RESISTOR ASSY, HIGH-VOLTAGE	
	⚠1-417-125-11	SELECTOR, ANTENNA	
	⚠1-451-255-11	DEFLECTION YOKE (SY-164)	
	1-452-032-00	MAGNET, DISK; 10MM ø	
	1-452-094-00	MAGNET, ROTATABLE DISK; 15MM ø	
	1-452-146-21	MAGNET, BMC	
	⚠1-452-351-11	NECK ASSY, CRT (NA302)	
	*1-557-261-11	CABLE, P-P	
	⚠1-557-761-11	CORD, POWER	
	⚠1-561-347-11	OUTLET, AC	
	1-562-684-11	SOCKET, DIN 6P	
L901	⚠1-426-059-21	COIL, DEGAUSSING	
L902	⚠1-426-059-21	COIL, DEGAUSSING	
T901	⚠1-439-339-12	TRANSFORMER ASSY, FLYBACK	
V901	⚠8-736-652-05	CRT (A64JKJ10X)	

ACCESSORIES AND PACKING MATERIALS
****

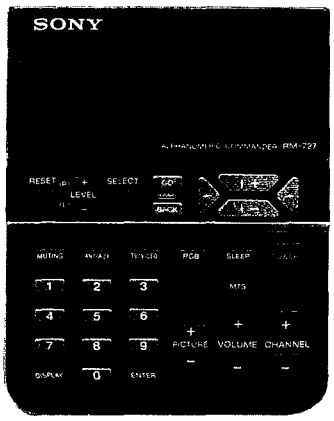
Part No.	Description	Remark
A-1470-705-A	COMMANDER ASSY (RM-727)	
1-513-379-00	CONVERTER (EAC-25)	
1-556-955-21	CABLE, AUDIO VIDEO	
3-701-631-00	BAG, POLYETHYLENE	
4-337-844-00	BAG, PROTECTION	
4-374-194-01	CUSHION (UPPER) (ASSY)	
4-374-195-01	CUSHION (LOWER) (ASSY)	
4-374-402-01	SHEET, CORRUGATED FIBERBOARD	
4-374-480-01	INDIVIDUAL CARTON	
4-482-111-21	MANUAL, INSTRUCTION	
4-482-112-21	MANUAL, INSTRUCTION	
4-491-213-22	INSTRUCTION	

NOTE:

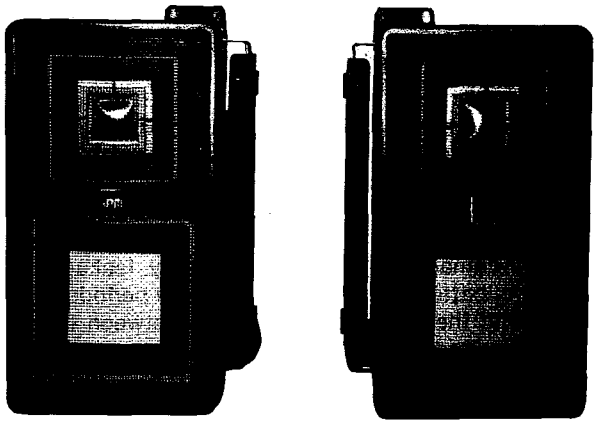
The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

RM-727/APM-X3U

SERVICE MANUAL



RM-727



APM-X3U

SPECIFICATIONS

RM-727

Remote Commander RM-727
with 2 size AA batteries
Connecting cable 1
Antenna connector (300 ohm to
75 ohm matching transformer)
.....1

APM-X3U

Side-mounting speakers (Weight approx. 1.5 kg each) with speaker cords
..... 1 pair
35 cm^2 (5.4 in^2), APM unit
55 cm^2 (8.5 in^2), Bass radiator unit

REMOTE COMMANDER SPEAKER SYSTEM

SONY®

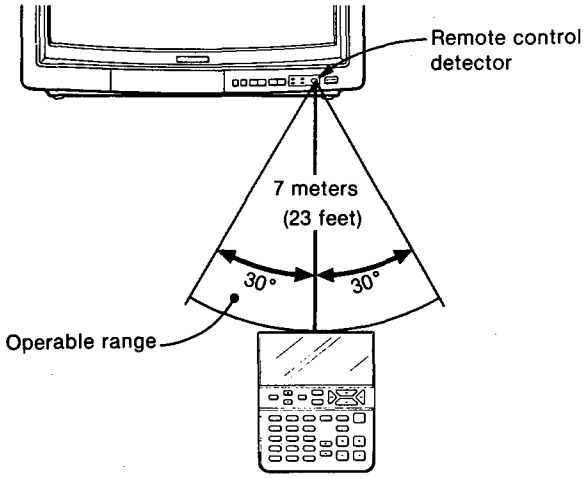
ACC

1. OPERATION

1 Turn the Remote Commander face down, press the tab and lift the cover.
2 Place batteries in the Commander with the polarities in the correct directions, as illustrated inside the case.
3 Replace the cover.

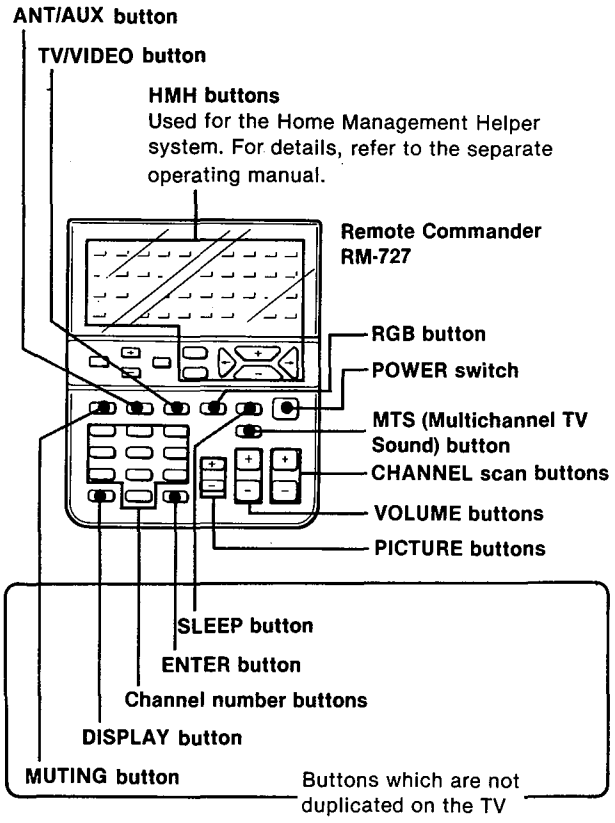
Notes

- Use 2 size AA batteries (IEC designation R6).
- In normal operation, batteries will last up to half a year. If the set does not operate properly, the batteries might be exhausted. Replace all with new ones.
- To avoid damage from possible battery leakage, remove the batteries for extended unused periods.
- Be sure that there are no obstructions between the Commander and the TV.
- Operable range is limited.



This TV set is capable of receiving normal VHF and UHF broadcasts plus cable TV channels. (See "Cable TV channel chart" below.)

Usually the Remote (Alphanumeric) Commander is all that is needed to operate the TV set in everyday use.



Cable TV channel chart*
Cable TV systems use letters or numbers to designate channels. To tune in a channel, refer to this chart.

Number on this TV	1	5	6	14	15	16	17
Corresponding CATV channel	A–8	A–7	A–6	A	B	C	D

18	19	20	21	22	23	24	25	26	27	28	29	30
E	F	G	H	I	J	K	L	M	N	O	P	Q

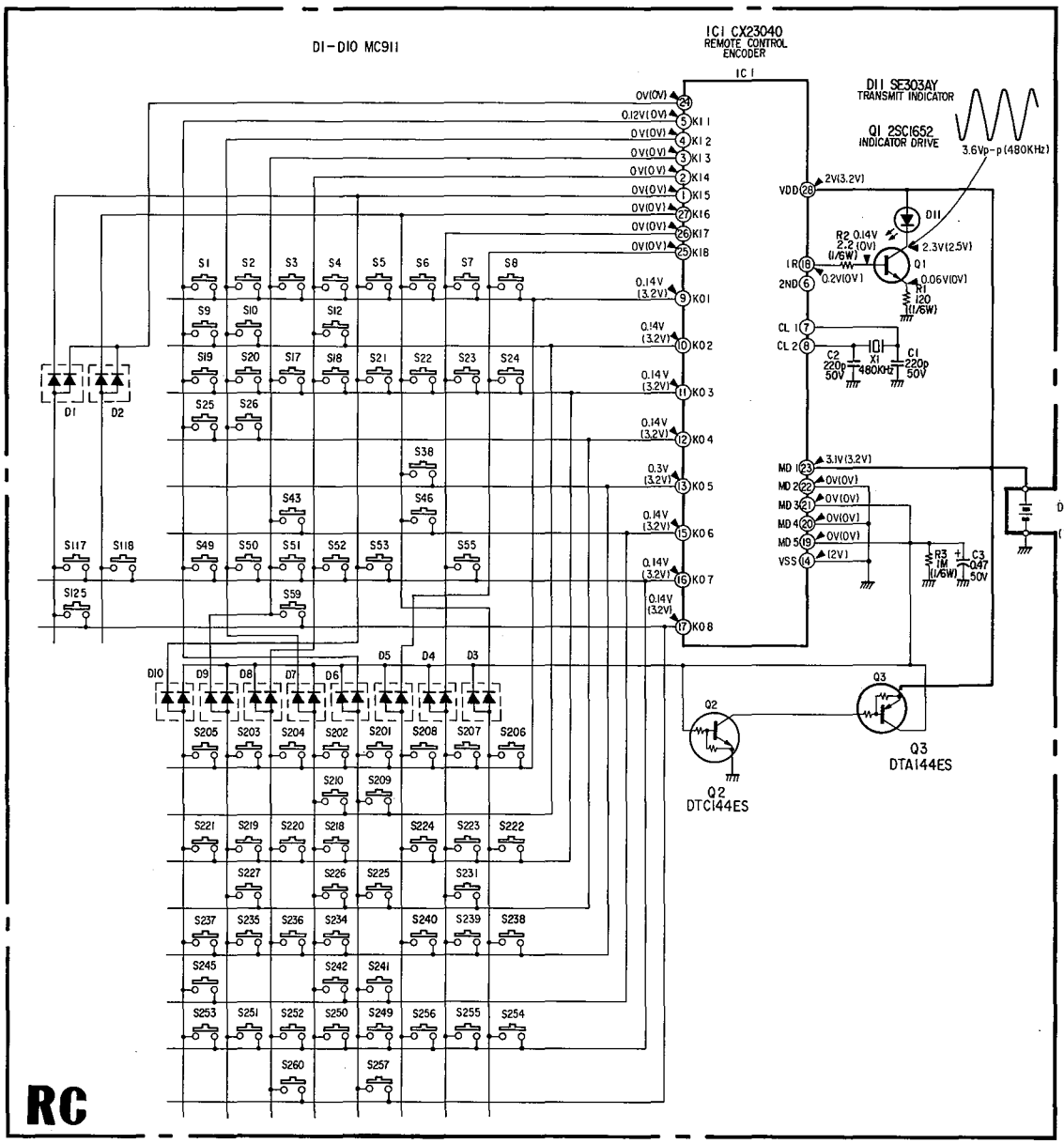
31	32	33	34	35	36	37	38	39	.....	.....	93	94
R	S	T	U	V	W	W+1	W+2	W+3	.....	.....	W+57	W+58

95	96	97	98	99	100	101	102	.....	.....	123	124	125
A–5	A–4	A–3	A–2	A–1	W+59	W+60	W+61	.....	.....	W+82	W+83	W+84

Check with your local cable TV company for more complete information on the available channels.

*The designation of the cable TV channels conforms to the EIA/NCTA recommendation.

2. SCHEMATIC DIAGRAM



KEY MATRIX

	KEY OUT 1	KEY OUT 2	KEY OUT 3	KEY OUT 4	KEY OUT 5	KEY OUT 6	KEY OUT 7	KEY OUT 8
KEY IN 1	S1 CHANNAL 1	S9 CHANNAL 9	S19 VOLUME (+)	S25 PICTURE (+)			S49 GO	
KEY IN 2	S2 CHANNAL 2	S10 CHANNAL 0	S20 VOLUME (-)	S26 PICTURE (-)			S50 (+)	
KEY IN 3	S3 CHANNAL 3		S17 CHANNAL(+)			S43 ANT/AUX	S51 (-)	S59 DISPLAY
KEY IN 4	S4 CHANNAL 4	S12 ENTER	S18 CHANNAL(-)				S52 →	
KEY IN 5	S5 CHANNAL 5		S21 MUTING				S53 ←	
KEY IN 6	S6 CHANNAL 6		S22 POWER		S38 TV/VIDEO	S46 RGB	S118 LEVEL(-)(L)	
KEY IN 7	S7 CHANNAL 7		S23 RESET				S55 SLEEP	
KEY IN 8	S8 CHANNAL 8		S24 MTS					

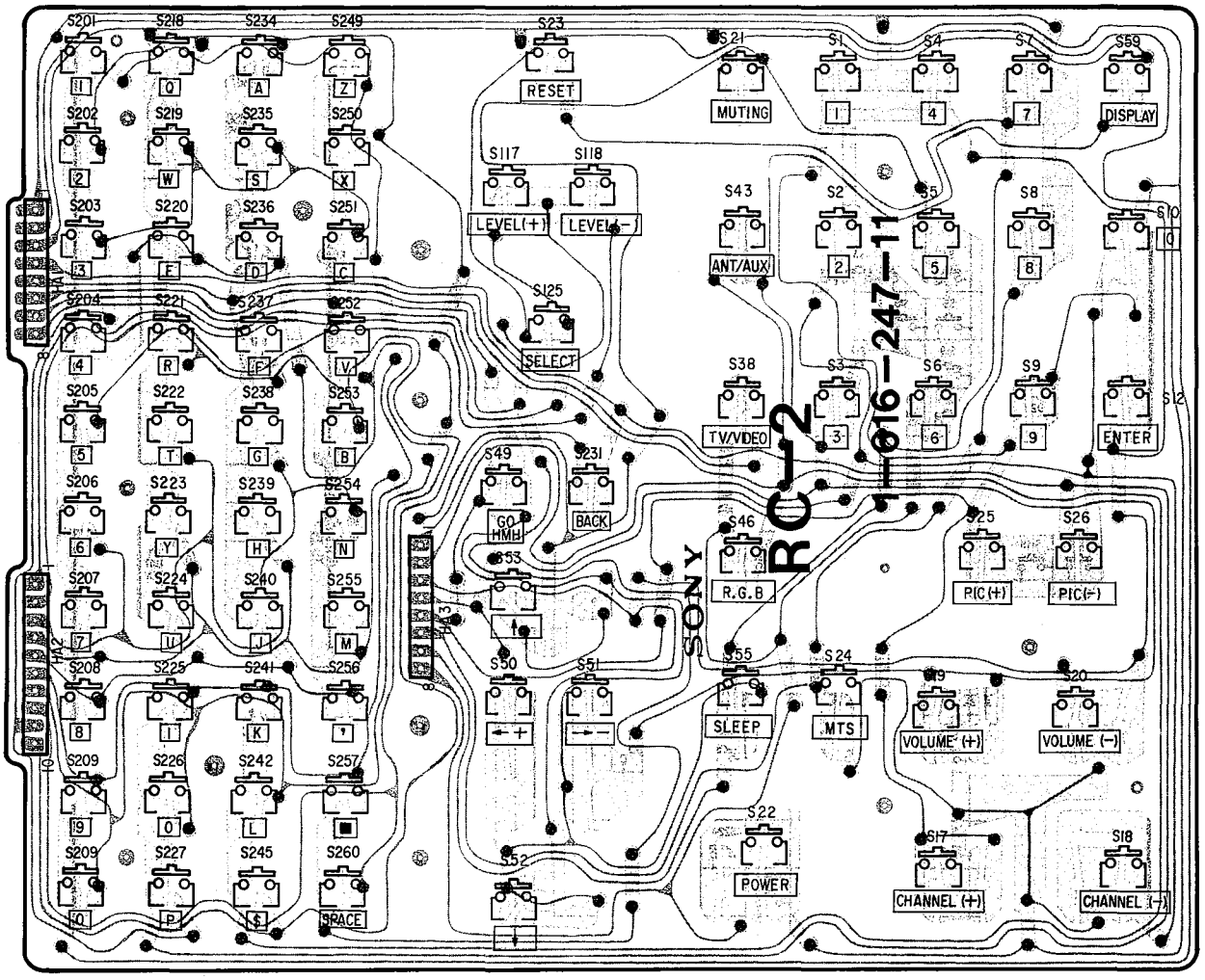
	KEY OUT 1	KEY OUT 2	KEY OUT 3	KEY OUT 4	KEY OUT 5	KEY OUT 6	KEY OUT 7	KEY OUT 8
D1							S117 LEVEL(+)(R)	S125 SELECT
D2							S118 LEVEL(-)(L)	
D3	S206 6		S222 T		S238 F		S254 N	
D4	S207 7		S223 Y	S231 BACK	S239 H		S255 M	
D5	S208 8		S224 U		S240 J		S256 ,	
D6	S201 1	S209 9		S225 I		S241 K	S249 Z	S257 ■
D7	S202 2	S210 0	S218 Q	S226 O	S234 A	S242 L	S250 X	
D8	S204 4		S220 E		S236 D		S252 V	S260 SPACE
D9	S203 3		S219 W	S227 P	S235 S		S251 C	
D10	S205 5		S221 R		S237 F	S245 $	S253 B	

- Voltages and waveform are for when [S1] button is pressed.
- Voltages in ( ) are taken with button not pressed.

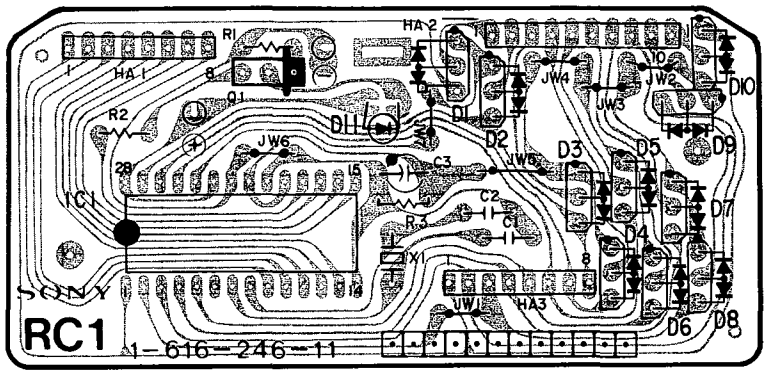
RC1 RC2

3. PRINTED WIRING BOARD

– RC2 Board –

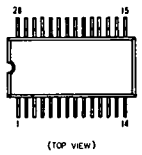


– RC1 Board –

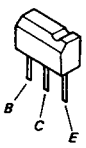


4. SEMICONDUCTORS

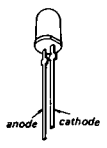
CX23040



2SC1652



SE303AY



MC911

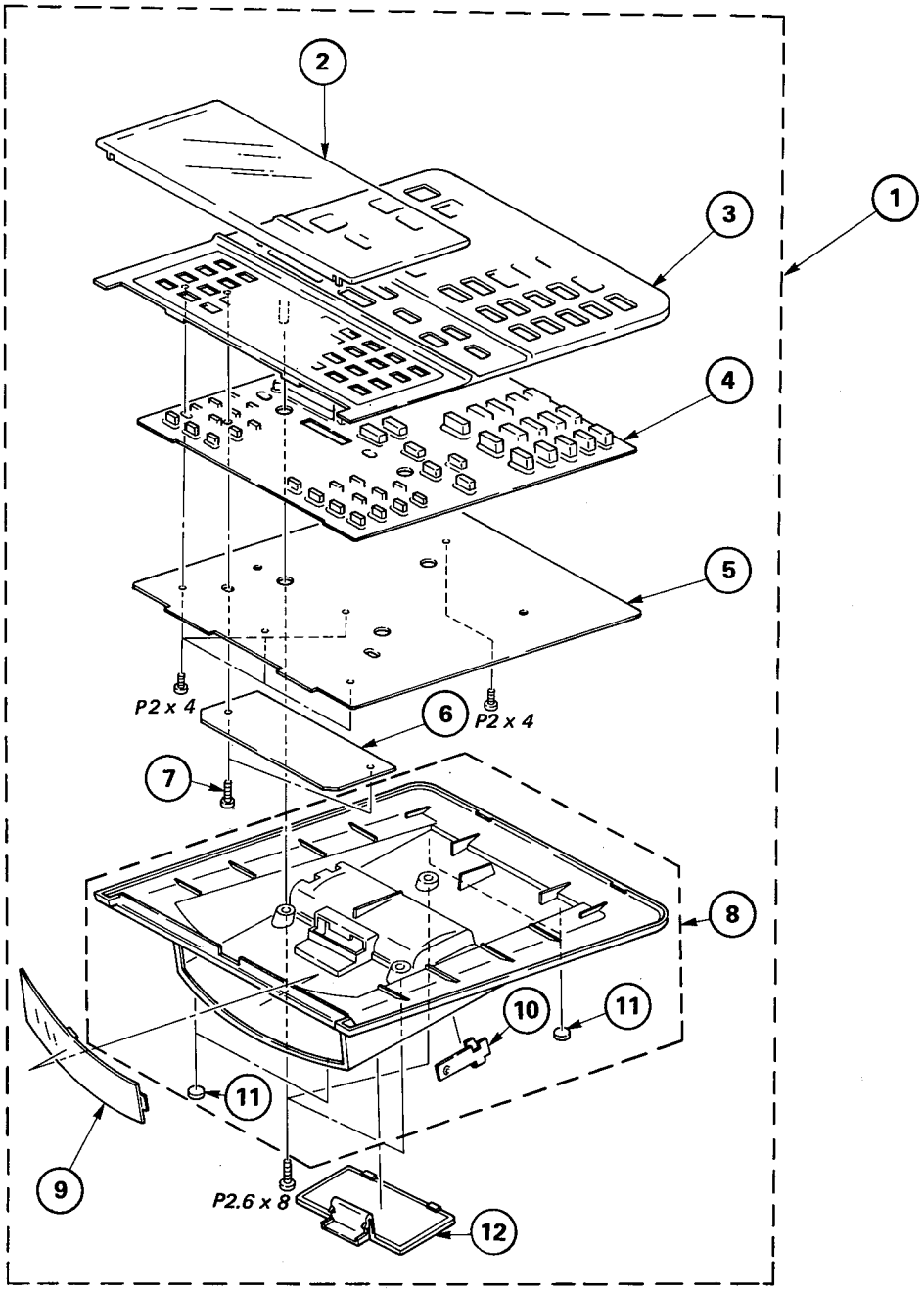
5. EXPLODED VIEW

5-1. REMOTE COMMANDER RM-727

NOTE:
- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

P2 x 4 7-685-102-19
P2.6 x 8 7-685-134-19

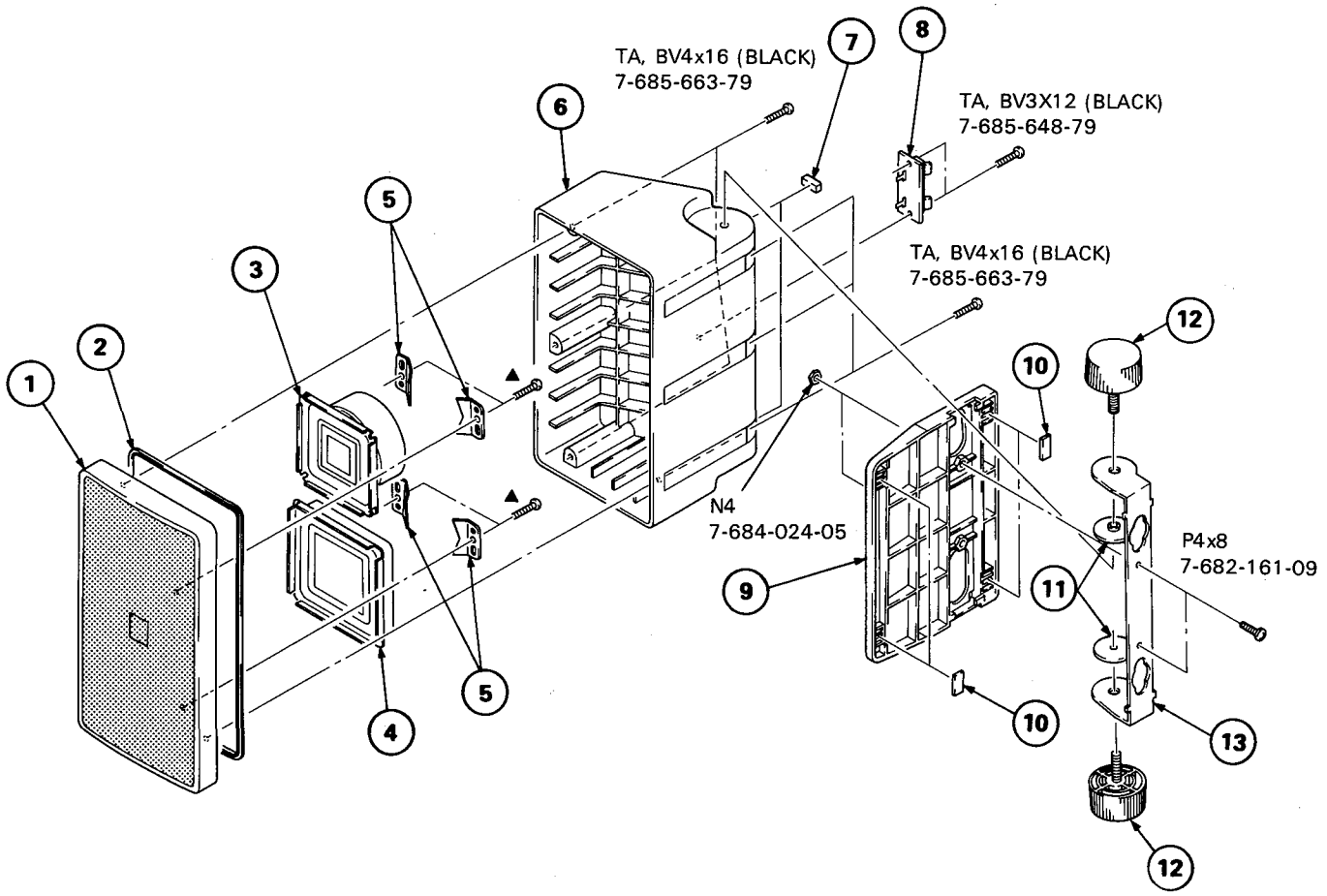


No.	Part No.	Description	Remark	No.	Part No.	Description	Remark
1	A-1470-705-A	COMMANDER ASSY (RM-727)	2-12	7	4-356-741-00	SCREW, TAPPING (BIND 2X5)	
2	4-374-476-01	LID, UPPER		8	X-4374-131-1	CASE ASSY, LOWER	10,11
3	X-4374-130-1	CASE ASSY, UPPER		9	4-374-470-01	PANEL, FRONT	
4	4-374-477-01	SHEET, RUBBER		10	4-350-925-00	TERMINAL (C), BATTERY	
5	*1-616-246-11	RC1 BOARD		11	4-374-469-01	FOOT, RUBBER	
6	*1-616-247-11	RC2 BOARD		12	4-374-474-01	COVER, BATTERY	

NOTE:
- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

5-2. SPEAKER APM-X3U

▲ : TA, BV4x12 7-685-661-14



No.	Part No.	Description	Remark
1	X-4907-701-1	BOARD ASSY,BAFFLE	
2	*4-907-707-01	RUBBER,SHIELD	
3	8-927-199-00	048A008	
4	8-927-189-00	SPEAKER UNIT (060P001)	
5	4-907-702-11	HOLDER,SP	
6	4-907-710-01	CABINET	
7	9-911-847-XX	SPACER,HOLE	
8	1-536-881-11	THERMINAL BOARD (SPEAKER)	
9	4-907-709-01	BASE	
10	4-907-703-02	CUSHION,LEG	
11	4-907-705-01	SPACER	
12	4-907-701-01	SCREW (A),ORNAMENTAL	
13	*4-907-706-01	BRACKET,CABINET	

6. ELECTRICAL PARTS LIST (RM-727)

NOTE:

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

When indicating parts by reference number, please include the board name.

• Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

• All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

CAPACITORS
• MF : μF, PF : μμF

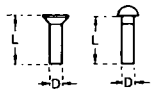
RESISTORS
• All resistors are in ohms
• F : nonflammable

COILS
• MMH : mH, UH : μH

Ref.No.	Part No.	Description				Remark
	*1-616-247-11	RC 2 BOARD **********				
	*1-616-246-11	RC 1 BOARD **********				
	4-374-471-01	TERMINAL (A), BATTERY				
	4-374-472-01	TERMINAL (B), BATTERY				
		CAPACITOR				
C1	1-102-110-00	CERAMIC	220PF	10%	50V	
C2	1-102-110-00	CERAMIC	220PF	10%	50V	
C3	1-123-586-00	ELECT	0.1MF	20%	50V	
		DIODE				
D1	8-719-000-04	DIODE MC911				
D2	8-719-000-04	DIODE MC911				
D3	8-719-000-04	DIODE MC911				
D4	8-719-000-04	DIODE MC911				
D5	8-719-000-04	DIODE MC911				
D6	8-719-000-04	DIODE MC911				
D7	8-719-000-04	DIODE MC911				
D8	8-719-000-04	DIODE MC911				
D9	8-719-000-04	DIODE MC911				
D10	8-719-000-04	DIODE MC911				
D11	8-719-107-82	DIODE SE303AY				
		IC				
IC1	8-759-909-49	IC CX23040				
		TRANSISTOR				
Q1	8-729-965-22	TRANSISTOR 2SC1652				
Q2	8-729-900-89	TRANSISTOR DTC144ES				
Q3	8-729-900-65	TRANSISTOR DTA144ES				
		RESISTOR				
R1	1-247-809-00	CARBON	120	5%	1/6W	
R2	1-247-767-00	CARBON	2.2	5%	1/6W	
R3	1-247-903-00	CARBON	1M	5%	1/6W	
		CRYSTAL				
X1	1-527-476-00	OSCILLATOR, CERAMIC				

HARDWARE NOMENCLATURE

Screw: P 3 x 10
- *L: Length in mm*
- *D: Diameter in mm*
- *Type of head*
- *Indicated slotted-head only. Unless otherwise indicated, it means cross-recessed head (Phillips type).*



Nut, Washer, Retaining ring: N 3
- *Diameter of usable screw or shaft*
- *Reference designation*

Reference Designation	Shape	Description	Remarks
SCREWS			
P		pan-head screw	binding head (B) screw for replacement
PWH		pan-head screw with washer face	binding-head (B) screw and flat washer for replacement
PS PSP		pan-head screw with spring washer	binding-head (B) screw and spring washer for replacement
PSW PSPW		pan-head screw with spring and flat washers	binding-head (B) screw and spring and flat washers for replacement
R		round-head screw	binding-head (B) screw for replacement
K		flat-countersunk-head screw	
RK		oval-countersunk-head screw	
B		binding-head screw	
T		truss-head screw	binding-head (B) screw for replacement
F		flat-fillister-head screw	
RF		fillister-head screw	
BV		brazier-head screw	

Reference Designation	Shape	Description	Remarks
SELF-TAPPING SCREWS			
TA		self-tapping screw	ex: TA, P 3 x 10
PTP		pan-head self-tapping screw	binding-head self-tapping (TA, B) screw for replacement
PTPWH		pan-head self-tapping screw with washer face	binding-head self tapping (TA, B) screw and flat washer for replacement
PTTWH		pan-head thread-rolling screw with washer face	binding-head (B) screw and flat washer for replacement
SET SCREWS			
SC		set screw	
SC		hexagon-socket set screw	ex: SC 2.6 x 4, hexagon socket
NUT			
N		nut	
WASHERS			
W		flat washer	
SW		spring washer	
LW		internal-tooth lock washer	ex: LW3, internal
LW		external-tooth lock washer	ex: LW3, external
RETAINING RINGS			
E		retaining ring	
G		grip-type retaining ring	

Q2030 on "B" Board
Reset transistor
Bracket on back

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